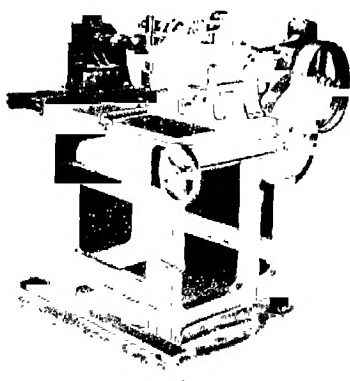


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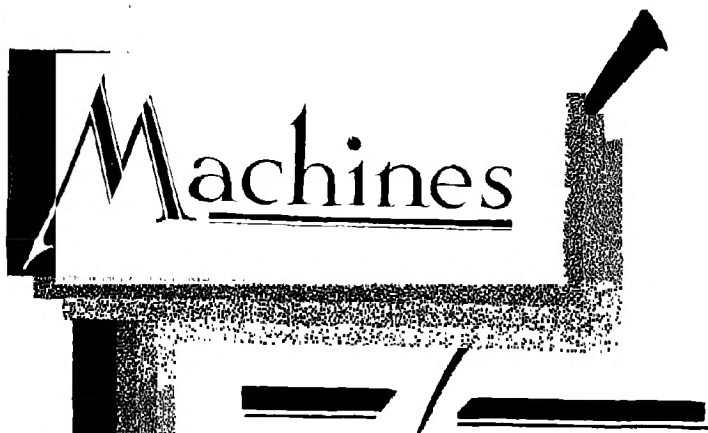
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PAPERBOARD PACKET AND CARDBOARD BOX MANUFACTURE

*A Practical and Exhaustive Treatise intended to
meet the requirements of Manufacturers and Traders*

BY
E. T. ELLIS

With 204 Detailed Diagrams

LONDON
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PREFACE

THE rapid rise in the popularity of paperboard packets and cardboard boxes is one of the most astonishing achievements of modern twentieth century trading. It seems but yesterday that biscuit bakers were telling us they could only use tins for containing their wares, while for a great many years tobacco traders rigidly held on to the idea that only wooden boxes and tin cans were suitable for their purpose, in addition to which meat traders looked with scorn on any container which was not made either of glass, earthenware, wood, or tin. Nowadays, however, paperboard packets, folding cartons, and cardboard boxes find very extensive use in these industries, and it is no exaggeration to say that there is hardly a trade which does not want, or which cannot use containers of this kind to-day.

Some claim that the paperboard packet and cardboard box industries have already reached their zenith. This is quite contrary, however, to my experience, which leads me to believe that no really satisfactory and perfectly efficient substitute for them will ever be found. Manufacturers, therefore, who are hesitating about expending further capital on additional plant should get it put down right away, as the demand will be bigger than ever, and orders which used to be for small lots will be wanted in long numbers.

Other countries are far ahead of us as regards the paperboard packet and cardboard box industries. Those manufactured, for instance, in France are real works of art in many cases, while those emanating from Germany are marvels of cheapness, both as regards the smallest and as regards the largest sizes. Those emanating from the U.S.A. are undoubtedly the most attractive of any, *i.e.*, in America paperboard packets and cardboard boxes are regarded as

being silent salesmen, and that this is really so has been proved over and over again.

Very few books have so far been written on the paper-board packet and cardboard box trade. Most of those which are now in print are published in America. My intimate knowledge of the industry in all its branches leads me to believe that there is a real need for a practical work in the British Isles, and this belief is backed up by inquiries received from various firms engaged in the industry, from time to time, as to whether I had already issued such a technical manual. I would like to point out, however, specially that this book is a trade hand-book, and is intended for traders. It is not a volume dealing with the theoretical side of this vast trade, nor does it concern itself with unproved possibilities of future development. It is a practical book for practical men, and shows how to cut, slit, glue, fold, stitch, and print existing models, which by actual use have proved their serviceability. Many different interests are covered, and it is believed that sufficient examples have been given to suit almost any purpose under average trading conditions. The copious index at the end of the book will enable readers to turn up any individual item in a moment.

I extend my warmest thanks to Messrs. S. C. Phillips & Co., the Editor of *The Paper Box and Bag Maker*, and Messrs. Crosby Lockwood & Son for the courtesies they have extended to me during the publication of the work in serial form in *The Paper Box and Bag Maker*, and while arrangements were being made for its publication as the present book.

Readers of this volume are reminded, just as readers of the series were, that most boxes and packets are protected by patents. It is, therefore, necessary to put an inquiry through a patent agent in the usual way with regard to each one of the items about to be discussed, before proceeding with the production of any of them.

Suggestions for the improvement of future editions will be welcomed if sent addressed to me, care of the publishers.

E. T. ELLIS.

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PAPERBOARD PACKET AND CARDBOARD BOX MANUFACTURE

CHAPTER I

Boxes and packets are now required for a great many purposes, and it may be interesting and useful to discuss a few of the large number of their more important applications. Not only shall I discuss them, but types will be illustrated, dimensions will be given, and details of the angular bends that are required will in all cases be included.

Wide variation will be noticed both as regards the size and shape of the various specimens. The weight as a rule varies much less, and in the case of many small boxes or packets is under two ounces. The character of individual boxes is also subject to very considerable variation; sometimes these are paper-covered, the paper bearing the print; in others the box is printed on both sides; while in still other cases the outer side only carries printed matter. Those box-makers who have not put down printing plant will have to arrange for this work to be done for them, as it is obviously carried out before. A three-colour printing plant is usually, however, regarded as money well invested.

TWO INTERESTING CARTONS

Fig. 1 illustrates a film pack carton much wanted by the photographic industry. In this drawing A is the top and B is the bottom, D and E are the sides, while C is the junction flap, which after being heavily covered with glue or other adhesive is attached to the back of E, so that its inner margin corresponds with the outer margin of E denoted by

the letters PP. The bottom is extended to the right by a two-end flap F G, while the top A is extended in the other direction in a similar manner. The sides D and E are extended in both directions by small flaps H, H, and K, K, the shapes of which should be particularly noted.

Cuts are required along the lines RN, RO, and MQ. When these have been made, right-angled bends must be

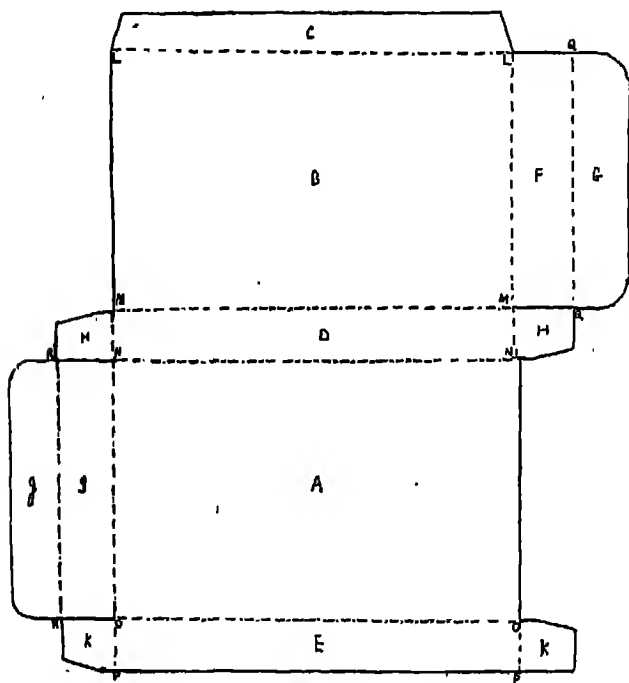


FIG. 1.—FILM PACK CARTON.

arranged for along the lines LL, MM, NN, and OO ; similar bends being made along the lines MNOP, and NML, while yet other right-angled bends are also required along the lines RR, OP, and QQ. Adhesive is only required on the junction flap C, that is to say, the ends are both unsealed, and the carton is, therefore, very easy to open.

The dimensions of this model are as follows :—

Length, $4\frac{3}{8}$ inches ; width, $2\frac{1}{4}$ inches ; depth or thickness,

$\frac{5}{8}$ of an inch ; total weight uncharged, rather over $\frac{1}{4}$ of an ounce. This packet is printed on the outside only.

In Fig. 2 we have a carton in which bottles of iodised throat tablets are sold by pharmacists all over the country. In this model A is the front, and B is the back, D and E are the two sides, and C is the usual junction flap, which is attached to E in the same manner as that described in the case of the previous example. The front A is extended in

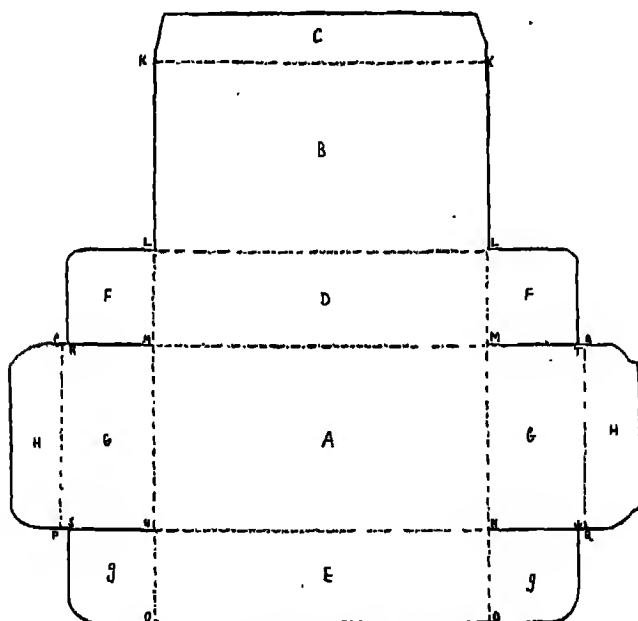


FIG. 2.—IODISED THROAT TABLETS CARTON.

both directions by a top G on the left, and a top flap H, and by a bottom or base G on the right, and a base flap H. The back B, as will be seen from the drawing, is not extended in either direction. The sides D and E are also extended to the right and left by smaller nearly square pairs of subsidiary flaps F, F, and I, I.

Cuts are required along the lines RM, SN, UN, and TM. When these have been made, right-angled bends must be arranged for along the lines KK, LL, MM, NN, PP, LMNO,

ONML, and QQ. With regard to adhesive for fitting together, the remarks in the previous example apply also to the present one.

The dimensions of this packet are as under :—

Total length, $3\frac{7}{8}$ inches ; width, $2\frac{1}{8}$ inches ; depth or thickness, $1\frac{1}{8}$ inches ; total weight uncharged, $\frac{1}{4}$ of an ounce. This packet is generally required printed in two colours on the outer side only.

TWO SINGLE-PIECE PACKETS

In my third drawing we have an example of a small cardboard packet in which powdered rouge is sold to ladies

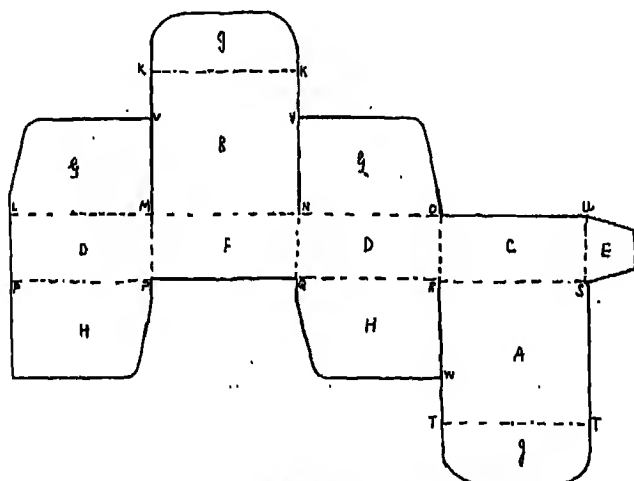


FIG. 3.—SINGLE-PIECE ROUGE PACKET.

for toilet purposes. In this example A is the top and B is the bottom, F is the front and C is the back, while D, D are the two sides. As will be seen from the drawing these are extended in both directions by pairs of flaps G, H, and G, H, the shapes of which should be particularly noted. The base is extended in an upward direction by a flap I, while the top is extended in a downward direction by a similar flap J. The back is extended to the right by a junction flap E, which after being heavily covered with

adhesive is attached to the left-hand D, so that its inner edge corresponds with the outer edge of D indicated by the line LP.

Extensive bending is a feature of this packet, but before this can be done cuts must be made along the lines VM, NV, and RW. Right-angled bends are next arranged for along the lines KK, LMNO, PP, QRS, and TT; as well as along the vertical dotted lines MP, NQ, OR, and US. The only portion of this packet requiring adhesive is the junction flap E.

With regard to dimensions, the total length is only $1\frac{1}{2}$ inches, while the width is very little more being $1\frac{1}{8}$ inches. The depth or thickness of this model is $\frac{5}{8}$ of an inch, while

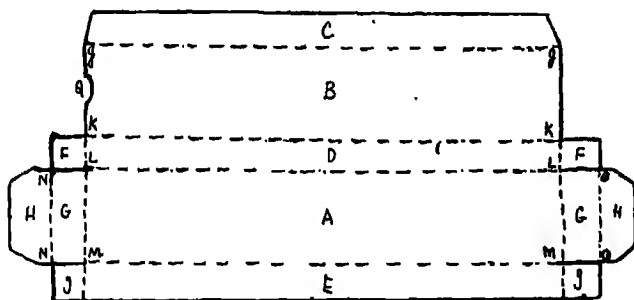


FIG. 4.—SINGLE-PIECE SIXPENNY CHOCOLATE PACKET.

the total weight uncharged is just under a quarter of an ounce. This packet is generally required printed in several colours on the outer side only.

In Fig. 4 we have an example of a single-piece sixpenny chocolate packet, of which thousands are sold every week. In this model A is the top of the packet, which lies flat instead of standing up, and B is its base. C and D may be thought to be the two sides, but C is the junction flap, which after being covered with adhesive is attached to the back of the second side, represented by E.

The top of this thin, flat packet is extended as will be noticed in both directions by ends G, G, and end flaps H, H. The two sides D and E are also extended in both directions by small, almost square flaps indicated at F, F, and I, I.

To secure the independent operation of all four flaps and both ends, cuts have to be made along the lines NL, NM, LO, and MO. When this has been done and when the thumb-hole Q has been cut out on B in the position shown, right-angled bends are arranged for along the lines JJ, KK, LL, and MM, as well as along the shorter lines KLMP, PMLK, NN, and OO. In this case also adhesive is not used for sealing the ends.

With regard to the dimensions of this interesting model, the total length is $7\frac{1}{2}$ inches, the width is $1\frac{5}{8}$ inches, and the depth is $\frac{5}{8}$ of an inch. Its total weight uncharged is slightly

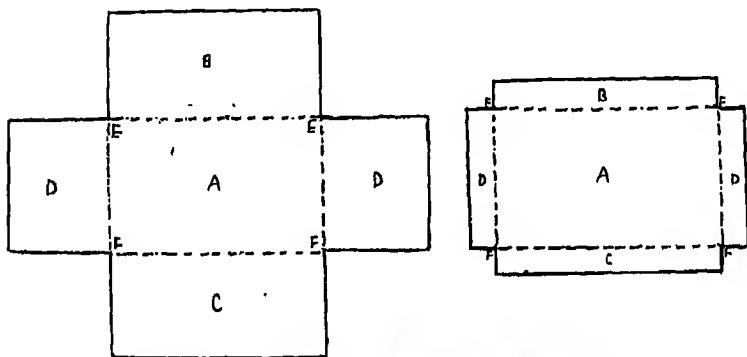


FIG. 5.—TWO-PIECE PARCHMENT ENVELOPE BOX.

under half an ounce. Larger but otherwise similar packets may also be in demand.

As to printing, two colours again are used, while bold impressed lettering is also employed.

A USEFUL TWO-PIECE BOX

Passing now on to a box made in two pieces, Fig. 5 illustrates an example of a parchment envelope box which is much in demand. In the case of the trough of the box, A is its base, C is its front, and B is its back, while D, D, are the two ends. With regard to the lid, it should be noted that this is made a shade larger, but that it is unattached to the box itself, except by its own grip when put on.

Right-angled bends are required in both cases along the

lines EE, FF, FE, and FE. After folding, junction of the various portions of the trough, and later of the lid of the box, is effected by means of the usual corner pieces of stout, heavily-gummed paper. These are not shown in the drawings.

The dimensions of this popular model are :—

Length, $8\frac{1}{2}$ inches ; width, 5 inches ; depth, $3\frac{7}{8}$ inches ; total weight uncharged taking the two portions together, $3\frac{1}{2}$ ounces. Larger sizes constructed similarly are also required.

All outer portions except the case of the trough should be supplied paper-covered, but printing is not required on any outer or inner portion of this box, the envelope makers using their own labels on it.

CHAPTER II

IN Chapter I I briefly described and illustrated various boxes and packets required by the photographic industry, the pharmaceutical trade, the toilet preparation manufacturer, the chocolate producer, and the stationer. In the present chapter five other boxes and packets will

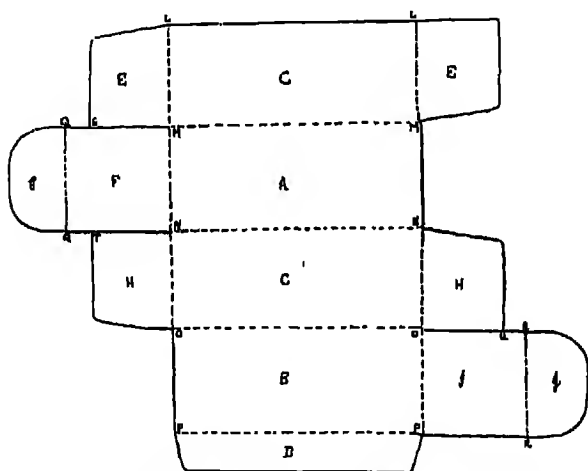


FIG. 6.—SINGLE-PIECE SHAVING STICK REFILL PACKET.

be commented upon, each of which is required very largely by the particular trade in question.

A USEFUL SHAVING STICK REFILL PACKET

Fig. 6 illustrates a simple packet in which shaving stick refills are sold. In this drawing A represents the front, and B represents the back, while C, C are the two sides. D is a joining or junction flap, which, after being heavily covered with adhesive, is attached to the back of C so that the line PP corresponds with the line LL.

The sides C, C are extended in both directions as shown, by curiously shaped flaps E, E and H, H. The front is extended to the left by a base F, and a base flap G, while the back is extended to the right by a top I, and a top flap J.

Slits must be made along the lines SM, TN, and OU, in order to liberate the various parts, and to secure independent operation. Right-angled bends are then arranged for along the lines MM, NN, OO and PP, as well as along certain shorter and certain longer lines indicated in the diagram at QQ, LMNO, PON, ML and RR. Adhesive is only required at the one point already indicated, and this packet is generally printed on one side only in two colours.

The dimensions of this interesting model are as follows :

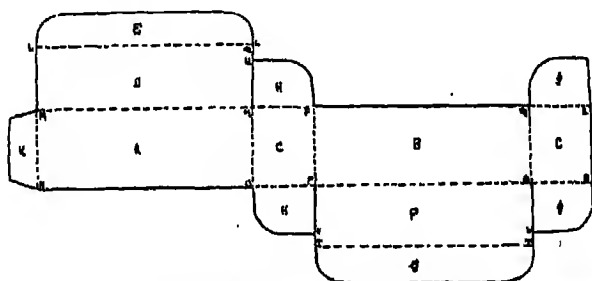


FIG. 7.—SINGLE-PIECE SINGLE-OUNCE TOBACCO PACKET.

Height, $3\frac{1}{2}$ inches ; width of front, $1\frac{3}{8}$ inches ; width of side, $1\frac{3}{8}$ inches ; total weight uncharged, $\frac{1}{4}$ oz.

SEVERAL SINGLE-PIECE DESIGNS

Single-piece designs of boxes and packets are extremely popular, and it will, therefore, be desirable, I think, to describe several other interesting designs which can be cut out in one piece only.

Fig. 7 illustrates a model of a tobacco packet containing one ounce only. In this drawing A represents the front, and B represents the back. C, C are the ends respectively, and K is an end junction flap, which, after being heavily covered with adhesive, is attached to the back of the right-hand C so that the line MN corresponds with the line RS.

As to the other portions of the packet, D represents the top and E the top or lid flap, while F represents the base, and G is the base flap. The sides C, C are extended in both directions by small subsidiary flaps of the shape shown in the figure, these being indicated by the letters H, H and I, I. In order that H, H may operate independently slits must be made along the lines UM and PV; while in order that the lower flap I may operate independently, a slit must be made along the line QW.

Right-angled bends are next required along the lines LL,

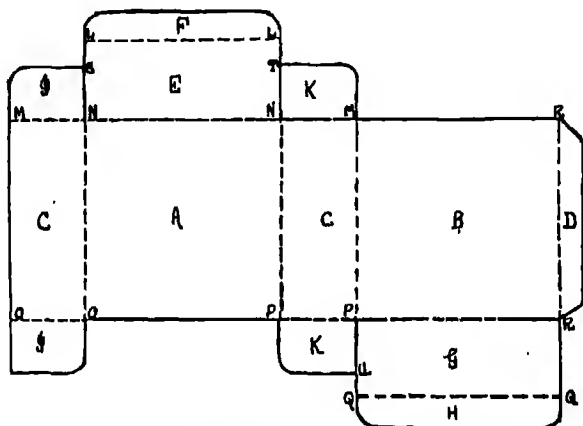


FIG. 8.—SINGLE-PIECE DESIGN FOR CIRCULAR DENTIFRICE TABLET CONTAINER.

MMP, OPQS, QR and TT. They are also required, as will be gathered, along the shorter lines MN, MO, PP and QQ. Adhesive is only required on the small junction flap K, and the packet as it comes on the market is generally printed on one side only in one or more colours.

The dimensions of this model are: Length, $3\frac{1}{8}$ inches; height, $1\frac{1}{8}$ inches; width, $\frac{7}{8}$ inch; total weight uncharged, just under $\frac{1}{4}$ oz.

Fig. 8 shows a single-piece design for a container in which a very popular brand of circular dentifrice tablets is sold, in nickel-plated holders. This model is slightly similar to one which was described in an earlier chapter, but as its

shape is entirely distinct it seems to call for special comment.

Taking the various parts of the model, B represents the top and A the base. C, C are the two sides, and D is the junction flap, which must be heavily covered with adhesive and attached to the back of the left-hand C so that the line RR corresponds with the line OM. It will be noticed that as in former models, the sides are extended in both directions by small rectangular flaps, one corner of each of which is rounded, these being indicated in the drawing by the letters I, I and K, K. The base A is extended in an upward direction by an end E and an end flap F, while the top B is extended in a downward direction by a front end G and an end flap H. To secure the independent operation of the ends, slits must be made along the lines SN, TN and PU.

As to the bending of this model, right-angled bends are required along the lines LL, MNNM, OO, PPR and QQ. Other bends are also required along the lines NO, NP, MP and RR. Apart from the use of adhesive on the junction flap D, it is not required for any other portion of this packet.

The dimensions of this very useful model are as follows : Length, $3\frac{1}{8}$ inches ; depth, $1\frac{1}{4}$ inches ; end length, $3\frac{1}{4}$ inches ; total weight uncharged, $\frac{1}{4}$ oz. Printing in two or more colours is required on the outer portion only.

Fig. 9 depicts a single-piece two-pound carton in which cube sugar is freely sold. Though the diagram appears at the first glance to be somewhat complicated, closer examination will prove that it can very simply be cut out and manufactured.

This carton consists, as will be seen, of no less than fourteen different parts. A represents the front, and, as will be expected, B depicts the back. C, C, are the two sides respectively, and the ends are somewhat complicated. The main junction flap is depicted by the portion marked G in the drawing, but there is a smaller but by no means unimportant junction flap F which is used for sealing the packet after charging, while the portion E also acts as a junction or sealing flap after being covered with adhesive. Box-makers will find it convenient to pack this somewhat bulky

model flat, but the various portions requiring glue should have this put on before dispatch, so that the sugar refiner only needs to moisten it after folding and charging, prior to packing these cube sugar cartons in substantial wooden boxes for sale to wholesale grocers.

The sides C, C are extended in both directions as shown by the portions H, H and K, K, which are practically square, while the back B is also extended in both directions by rectangular portions marked I, J, curiously shaped slits being cut in the former portion as indicated by the letters

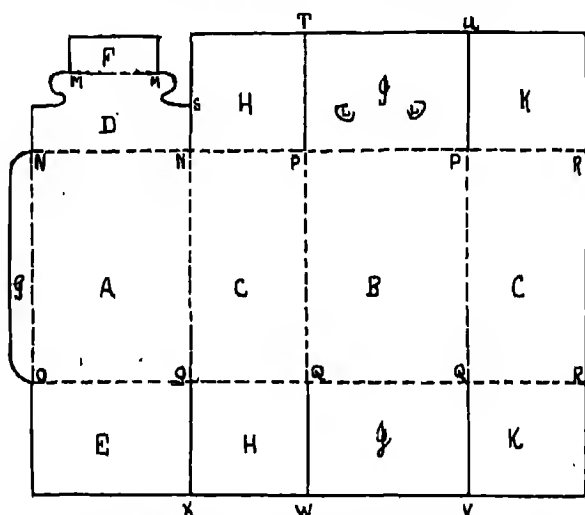


FIG. 9.—SINGLE-PIECE TWO-POUND CUBE SUGAR CARTON.

L, L. Into these the tabs on D fit when the packet has been opened by tearing along the perforation MM, and thus dust and air are to a large extent excluded from the contents.

To secure the independent operation of the numerous portions of this carton, cuts are required along the lines SN, TP, UP, VQ, WQ, and XO. Right-angled bends are then arranged for along the lines NNPPR, OOQQR, and also along the shorter lines NO, NO, PQ and PQ. After folding and attaching the junction flap G to the back of the right-hand C, its inner edge NO corresponds with the outer edge RR of that side.

The dimensions of this most interesting and useful model are : Length of front, $4\frac{1}{4}$ inches ; height of packet, 6 inches ; width of end, 3 inches ; total weight uncharged, $1\frac{1}{4}$ ozs. This packet is usually supplied printed on the outer side only in one or more colours.

A TWO-PIECE CIGARETTE PACKET

Fig. 10 is an interesting and much required two-piece cigarette packet. The upper drawing depicts the cover portion, while the lower illustrates the trough portion.

The construction of the cover presents no difficulties

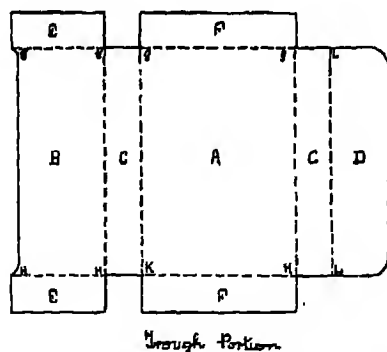
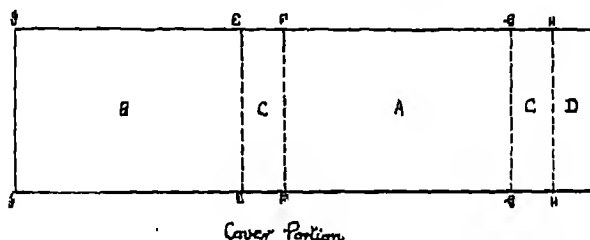


FIG. 10.—TWO-PIECE CIGARETTE PACKET.

whatsoever. A is the top, and B is the base, while C and C are the two ends. D is the junction flap, which is treated with adhesive, and then attached to the back of B so that its inner margin HH corresponds with the outer margin II. Right-angled bends are made along the lines EE, FF, GG, and HH.

With regard to the trough portion, A is the base of the trough, and B is a portion of the top. D is a smaller portion of the top, which in some models is slightly larger than shown here, so that when folded over it fits into the curved portion of B, the boundaries of which are indicated by the left-hand curved line GH.

With regard to the other portions of the trough F, F, are the main ends, and E, E, are the subsidiary ends, which fit over and to a great extent hold the others in position, although they are not attached to them by adhesive or in any other way.

Right-angled bends are required along the lines GG, HH, II, KK, GH, IK, IK and LL.

The dimensions of this inexpensive model are: Total length, 4 inches; length of end, $2\frac{7}{8}$ inches; depth of packet, $\frac{5}{8}$ inch; total weight uncharged, taking both portions together, $\frac{1}{2}$ oz. This packet is printed on the outer side only of the cover in one or more colours. The trough portion does not carry printed matter of any kind.

CHAPTER. III

IN the first two chapters our attention was mainly focussed upon the manufacture of single-piece boxes and packets. In the present chapter it seems desirable to concentrate upon dual piece models, as these are becoming increasingly popular with a great variety of traders. Some three- and four-piece models will also be mentioned, if possible, in later chapters, as despite the fact that these are costly to manufacture there is a good demand for them.

A TWO-PIECE TOILET SOAP BOX

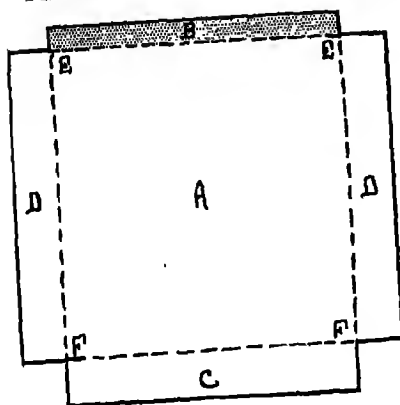
Fig. 11 depicts a very popular two-piece toilet soap box which can be cheaply produced without difficulty. Taking the lower sketch first which depicts the trough of the box, A is the base, while D and D are the two sides, C being the front and B being the back. Right-angled bends are required along the four dotted lines depicted by the letters EE, EF, FF, and FE. The corners are joined by the usually heavily gummed slips of stout paper.

The upper drawing shows the lid of the box, A being the top of the lid, D, D the two sides of the lid, and C the lid front. The shaded portion B in this sketch is not of cardboard, but can be made either of stout, heavily-gummed paper, or better still, of linen gauze. This portion is attached to the shaded portion of the trough back B, and the two-piece box then looks as if it had been cut out in one piece. Right-angled bends are, of course, made in the case of the lid along the dotted lines EE, EF, FF and FE, but in this case we have only two corners to join, namely those at the points F, F. Joins are effected in the same manner as that mentioned when speaking of the joins in the trough.

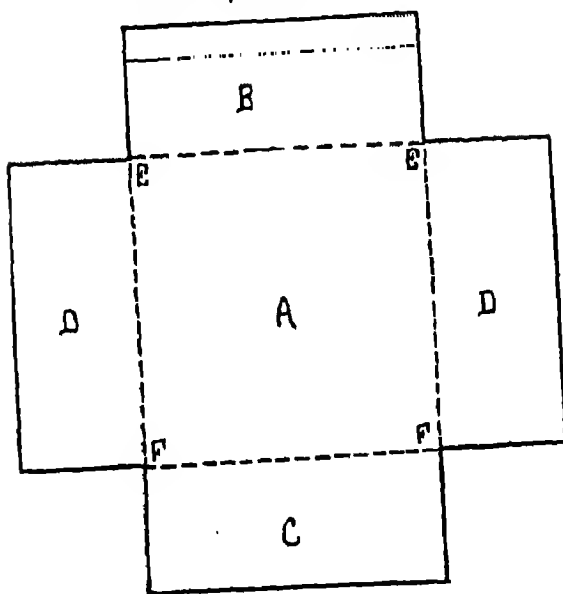
Dimensional data are :—

Length of box, $6\frac{1}{2}$ ins. ; width of box, $6\frac{3}{8}$ ins. , depth of

PAPERBOARD PACKET AND



Lid of Box



Trough of Box

FIG. 11.—A TWO-PIECE TOILET SOAP BOX.

box, $2\frac{3}{4}$ ins.; total weight uncharged, taking both portions together, $3\frac{3}{4}$ ozs.

With regard to the finishing of this box, the front, back, and sides of the trough should be paper covered, using good class coloured material ; while a similar covering should be employed for the front and sides of the lid. Though it may occasionally be asked for already printed, most samples

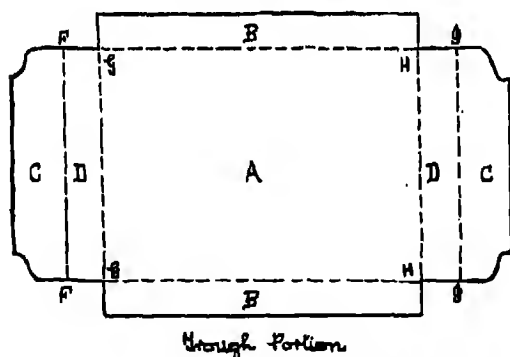
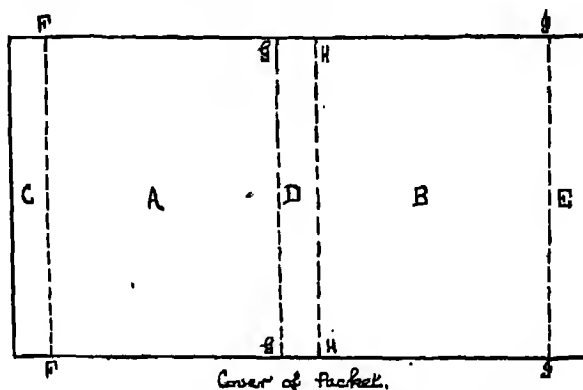


FIG. 12.—A TWO-PIECE CUBE SUGAR PACKET.

come on to the market in an unprinted state, as the makers, after charging with soap, paste their own printed labels on to the top and back of the lid.

A TWO-PIECE CUBE SUGAR PACKET

Readers may remember the rather complicated diagram of a cube sugar carton given in a previous chapter. In the

present instance the manufacture of this small sugar packet presents no difficulties. Outline drawings of both pieces are given in Fig. 12, and as in the previous drawing we will discuss the trough portion first.

As will be expected, A is the base of the trough, while the strips B, B are the front and back respectively. It has compound ends, two portions of each of which are indicated by the letters C, D, and C, D. Right-angled bends must be arranged for along the dotted lines FF, GG, HH, II, and also along the longer lines GH, GH.

Now as to the cover of this packet, which is shown in the top drawing, A is the top of the cover, and B is its base. The front side is shown at C, and the back side at D, while E is the junction or attachment flap, which, after being heavily covered with adhesive, is affixed to the back of C so that its inner margin, depicted by the line II, corresponds with the outer line of C.

Right-angled bends are arranged for, as will be expected, along FF, GG, HH, and II. The trough, when folded, is merely slipped into the glued cover, and is not actually attached to it in any way.

Dimensional data are :—

Length of packet, $4\frac{1}{2}$ ins. ; width of packet, $3\frac{1}{4}$ ins. ; depth of packet, $\frac{5}{8}$ in. ; total weight uncharged, weighing both pieces together, just under $\frac{1}{2}$ oz.

As to the printing of this interesting model, it may be asked for printed in several colours or plain. When it is supplied printed, only the cover portion is put through the presses, and this is printed on the outer side only.

A TWO-PIECE MATCH-BOOK CARTON

Fig. 13 shows what appears to be on the face of it a rather more complicated pair of models than any we have had up to now. As a matter of fact the diagram can be considerably simplified if the cartons are to be sold as boxes, and not sold packed flat in bundles as they usually are.

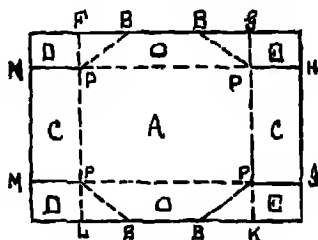
It will be seen that both the cover and the trough portions are identical as to design, except that the trough portion is slightly larger in certain of its parts than is the cover.

Similar lettering is used for both, in order that each need not individually be described.

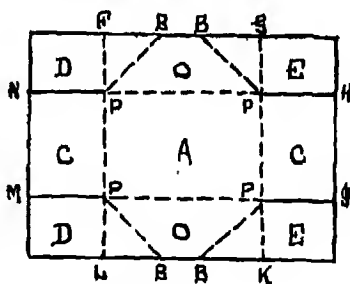
Taking the cover of this match-book carton, A is the top and C, C are the two ends. The front and back of this lid or cover are shown at O, O, and for the moment we must ignore the four short lines PB, PB, PB, and PB, if the true shapes of the front and back are to be realised. Readers will notice that the back is extended to the left and to the right by two almost square portions shown at D and E, while the front is similarly extended in both directions by flaps of the same shape and carrying the same letters. In order that these four may operate independently, slits must be made along the lines, NP, HP, IP, and MP.

A number of bends are required in this very interesting model. Long ones are made along the two lines PP, PP, parallel to O, O, while shorter ones are made also along the lines depicted by the letters PP, PP, but in this case they are, of course, parallel to the two portions C, and C. Still shorter bends, which are also right angles, are made along the lines FP, GP, PK, and PL. If preferred, two long bends can be made along the lines FPPL and GPPK, and shorter ones extending the cuts NP, MP, along the lines PP, PP.

Now as to the gluing arrangements, which apply alike to the cover and to the trough portion, the quickest way is to cover the whole of the inner side of the two portions C, C with adhesive, and then after folding in to attach the



Cover of Carton.



Trough Portion.

FIG. 13.—A TWO-PIECE MATCH-BOOK CARTON.

backs of the portions D, D, and E, E to these. In some models, however, a little adhesive is applied to all four portions D, E, E, D. These are then severally attached to the portions C, C.

Mention has already been made of the fact that it is usual to supply this model in bundles packed flat. When this is to be done packing bends have to be included, unless, of course, the carton is supplied in an unfinished, *i.e.*, an unglued condition. The packing bends are shown in each case by the dotted lines PB, and there are, of course, four alike in the cover and in the trough. These bends, however, instead of being single right angles, are practically double right angles. When each portion of the carton is opened out, as it must be for charging purposes, the packing bends virtually vanish.

Dimensional data are :—

Length of carton, $6\frac{3}{4}$ ins. ; width of carton, $4\frac{1}{8}$ ins. ; depth of carton, $2\frac{1}{8}$ ins. ; total weight uncharged, taking the two portions together, just over $1\frac{3}{4}$ ozs. The capacity, it may be mentioned, of this carton is 100 books of matches of the usual size.

Both portions should be supplied paper covered on the outer side only, and in most instances they can be sold unprinted. In those instances, however, where match-makers require them printed, this is carried out on the outer portion or top of the cover only.

A TWO-PIECE RETAILERS' QUARTER-POUND PACKET

Fig. 14 shows a very useful type of chocolate packet which is designed to take a quarter of a pound of sweetmeats. It may be mentioned in passing that larger models of identical design, so far as the various portions are concerned, are required to take half-pound and complete pounds of chocolates.

The main packet is shown in the top drawing, the bottom one being confined to the front and to two end portions.

Taking the upper drawing first, A is the top or lid of the packet, and F is the lid flap. B is the base or bottom of the packet, D is a portion of the front, E is the front flap,

and C is the back. The base B is extended in both directions by two rectangular portions G, G, while the back C is also extended in both directions by small angular flaps shown at H, H, these acting as corner pieces. In the lower drawing,

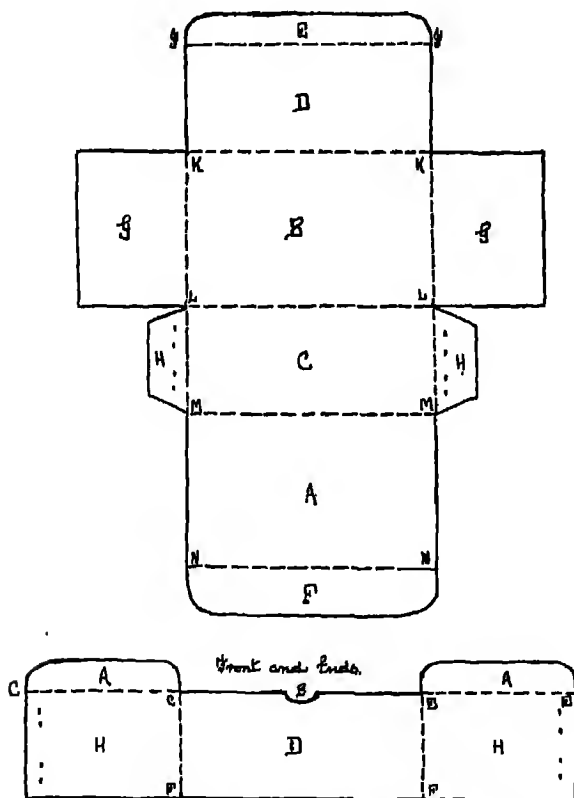


FIG. 14.—A TWO-PIECE RETAILERS' QUARTER-POUND CHOCOLATE PACKET.

as will be imagined, D is the front and H and H are the ends, A, A being the end flaps.

Now as to the bends required in the construction of this packet we will again take the top drawing first. Right-angled bends are made along the lines II, KK, LL, MM, and NN, while other similar bends are made along the lines KLM, MLK. In the lower drawing right-angled bends

are required along the lines CF, EF, and also along CC and EE.

No glue or other adhesive is required for this packet, it being held together instead by wire stitching. The points at which stitches are required are shown in the top drawing by the dots along H, H, and in the bottom drawing by similar dots along the outer margin of the ends H, H. When finally put together the portions H, H in the lower drawing are, as will be gathered, completely on the outside, while the ends G, G in the upper drawing are completely on the inside. The angular extensions of C in the upper drawing depicted by H, H come between these two ends, the wire stitches affixing them to H, H in the lower drawing, but not to their neighbours G, G. The lid flap F fits in in front of D in the top drawing, and behind D in the bottom drawing, or, in other words, between the two portions marked D. Rapid opening of this packet is facilitated by the thumb-hole B in the lower diagram.

Dimensional data are :—

Total length, 4 ins. ; total width, $2\frac{1}{2}$ ins. ; total depth, $1\frac{3}{4}$ ins. ; total weight uncharged, taking the two pieces together, just under $\frac{1}{2}$ an ounce, from which it will be gathered that thin card only is employed.

As to printing, the outer portions H, D, H in the lower sketch require it, while in the case of the top drawing, printed matter usually appears on the outer portions of A and C only.

CHAPTER IV

IN previous chapters boxes and packets consisting of one piece only have been described, while again we have considered models made up of two pieces. While other single-piece and two-piece models are covered in the present chapter, it seems desirable to include a four-piece box, and for convenience this will be taken first.

AN INTERESTING NOTE-PAPER BOX

Fig. 15 depicts a four-piece box in which finely finished note-paper is sold by stationers. The lid consists of a single piece, the main trough portion forms a second single piece, while the two trough ends form the remaining two pieces. Some box makers may prefer to cut this model out in two instead of in four pieces, and obviously this can be done easily.

Taking the lid first, A represents the top of the lid, B and B are its sides, while C and C are the lid ends. Right-angled bends are made along the lines DD, DE, EE and ED. The corners are joined by the usual heavily-gummed corner flaps, which are not shown in the drawing.

With regard to the main trough portion, A is the base of the trough, B and B are the trough sides, and the ends are attached along the lines CD, CD. Right-angled bends are made, as will be expected, along the lines CC and DD.

Gummed paper flaps are shown attached to both the trough ends, right-angled bends being made in each case along the lines AB, AB. It is usual to attach these flaps to the under and not to the upper side of the trough base A.

The following are the dimensional data relating to this model :—

Total length, $6\frac{1}{2}$ ins. ; width, 4 ins. ; depth, 2 ins. ;

total weight uncharged, taking all four portions together, $1\frac{3}{4}$ ozs.

With regard to finishing this model, all the outer portions

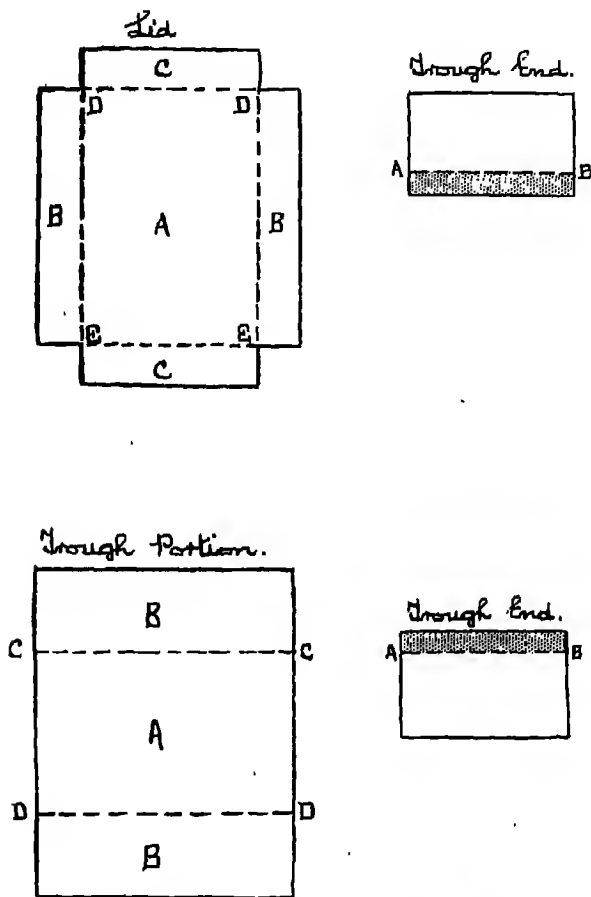


FIG. 15.—FOUR-PIECE BOX FOR FINELY FINISHED NOTE-PAPER.

of the lid are paper-covered as a rule. The outer portions of the trough sides and trough ends are similar paper-covered, but not the outer portion of the trough base. Box makers are not, as a rule, required to print anything on any portion of this box.

CONCERNING A CHRISTMAS CRACKER BOX

Fig. 16 shows the trough portion only of a two-piece box in which small Christmas crackers are largely sold. In this drawing A is the base of the trough, B and B are the trough sides, while C and C are the trough ends. The shaded portions extending the trough ends are the gummed corner flaps, all four of which are easily attached to the two sides B, B, when right-angled bends have been made along the dotted lines DE, DD, DE and EE.

The lid portion of this useful model is not illustrated, as it is almost exactly similar to the trough, excepting obviously that it must be made a shade larger. Corner pieces are used for the lid in the same manner that they are employed for

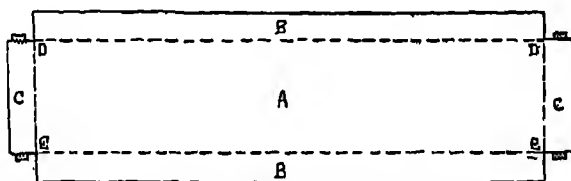


FIG. 16.—TWO-PIECE CHRISTMAS CRACKER BOX (TROUGH ONLY).

the trough, while the right-angled bends are identical in the two.

The following dimensional data relate to this simply manufactured model :—

Total length, $9\frac{1}{2}$ ins. ; width, 4 ins. ; depth, 1 in. ; total weight uncharged, taking both the trough and the lid together, just under $2\frac{1}{2}$ ozs.

The finishing of this model is rather an important matter, and cannot safely be ignored by the box maker. The lid must be paper-covered all over its entire outer portion, while the outer sides of the portions B, B, C, C, in the drawing must be similarly paper-covered. Good class white or creamy-white ribbed or otherwise ornamented paper is employed, narrow margins of this being taken over the four edges and attached to the inner portions of the trough sides and ends. As to printing, this is subject to some variations.

but in most models the lid is printed on the top of the outside and on the outer portion of one or both lid ends. The trough portion does not usually carry printed matter of any kind.

SOMETHING USEFUL TO THE SUGAR TRADE

Although some attention has already been given to the requirements of the sugar trade from the box maker, it seems desirable to include in this chapter another model which takes the form of a two-piece sugar packet. This is, therefore, sketched out in Fig. 17.

The cover portion of this very useful model seems only to necessitate accurate description, as the trough portion is identical with it in every respect, except, of course, that it is a shade smaller, and that the thumb-holes O, O, of the cover are absent in the trough. Taking, therefore, the various portions of the cover only, A depicts the top or main lid portion, B and B are the sides of the cover, and C and C are the ends respectively.

It will be noticed from the drawing that the sides of the cover are extended in both directions by rectangular flaps indicated by the letters D, D, and E, E. These make the ends exceptionally strong, as will be realised as soon as the cover is put together.

In order that the various portions of this useful model may operate independently, slits must be made along the thicker lines FL, HM, MI and LG. When this has been done right-angled bends are arranged for along the lines LL, MM, KLMN and NMLK. As to the use of adhesive, some box makers may prefer merely to cover the inner side of C, C, with glue, but it is usual to glue all the four portions D, D, E, E, on their outer side, and then, after bending, to attached the unglued ends C, C, to these.

The dimensional details relating to the above are set out as under :—

Length, $5\frac{1}{2}$ ins. ; breadth, $3\frac{3}{8}$ ins. ; depth, $3\frac{1}{4}$ ins. ; total weight uncharged, taking both portions together, $1\frac{1}{4}$ ozs.

As to printing, the trough portion usually carries no printed matter of any kind on either side. The main printing

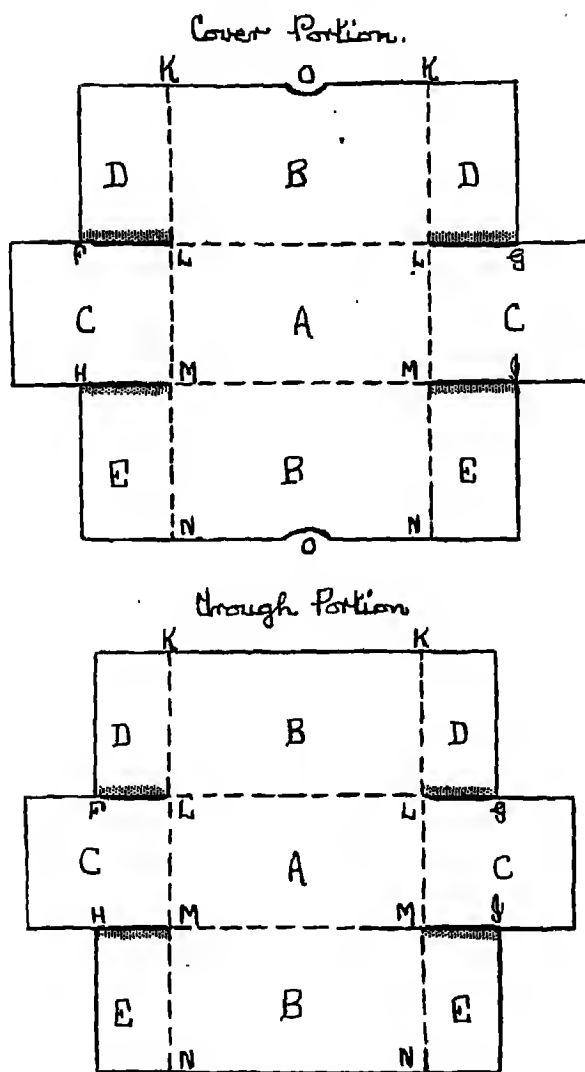


FIG. 17.—TWO-PIECE SUGAR PACKAGE.

on the cover portion is, as will be gathered, on the outer side of A, while printing on the outer side of B, B, and C, C, may also be demanded. The concealed portions D, D, E, E,

do not carry printing, while no portion of the inner surface of the cover is usually printed upon.

TWO IMPORTANT PACKETS

Some box and packet makers may prefer to confine their attention to some of the smaller models, as the storage of the larger boxes just described even for short periods may present a difficulty. The two last models in the present

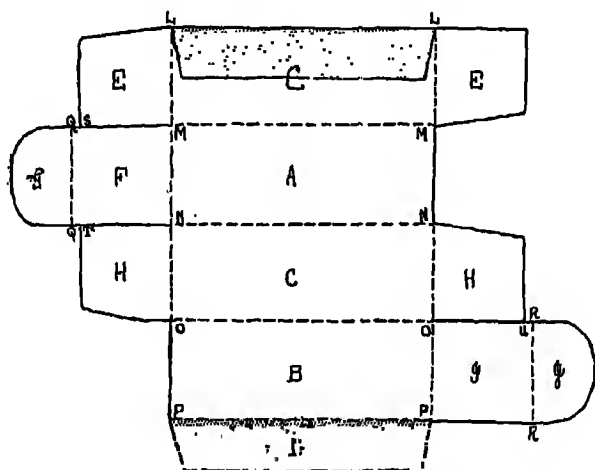


FIG. 18.—SINGLE-PIECE ROLL FILM PACKET.

chapter, therefore, are much-wanted packets, and both are wanted in very large quantities.

Fig. 18 depicts a single-piece roll film packet, and this model is illustrated here in order to show how packets which are somewhat similar in appearance and construction may be required and demanded by totally different industries. In the present instance the model is in use by producers of roll films, but in my second chapter it will be remembered that a somewhat similar, though rather larger, model was in use by manufacturers of shaving stick refills.

I am not describing the model fully in detail again, as the present drawing is similarly lettered to Fig. 6 in the second chapter. Many slight differences might be pointed

out if space permitted, the most important one being, of course, the much larger junction flap D, which the present possesses, this being clearly shown by the two shaded portions in the drawing. The slitting arrangements in the two models are exactly the same, and the bending arrangements are identical. The same thing applies to the use of adhesive.

The dimensional details are, however, rather different, and these are, therefore, set out below :—

Height, $2\frac{1}{8}$ ins. ; width of front, $\frac{7}{8}$ in. ; width of side, 1 in. ; total weight uncharged, rather under $\frac{1}{4}$ oz. Printing in two or more colours may be demanded on the outer portions of C, A, C, B, F and I.

Fig. 19 illustrates a single-piece packet of a very popular type, which in the present instance is largely used by manu-

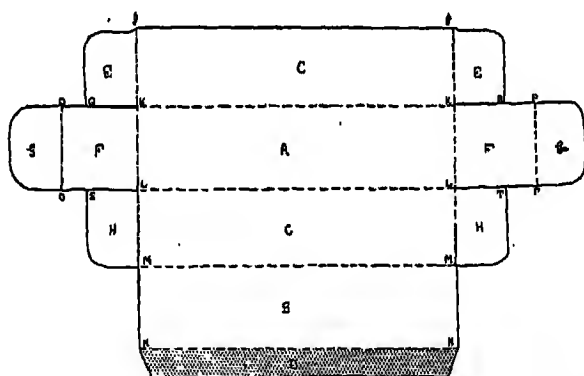


FIG. 19.—SINGLE-PIECE PACKET FOR TUBES OF COLD CURE.

facturers of a well-known cold cure, as the container for tubes in which this is sold. Manufacturers of toothpastes, however, and of special skin creams now so largely sold in tubes, will also be interested in it, and box makers who arrange to manufacture it should, therefore, find it a very profitable line.

Taking the various portions of the packet in turn, A is the front and B is the back. C and C are the sides, while D is the junction or attachment flap, which, after being heavily

covered with adhesive, is glued on to the back of C so that its inner margin NN corresponds with the outer margin II of C.

The front is extended in both directions as shown in the drawing by an almost square top and base F, F, and rectangular top and base flaps, G, G, two of the corners of each of which are rounded. The sides C, C, are also extended in both directions by small more or less rectangular flaps E, E, and H, H, one of the corners of each of which is rounded.

To enable the different portions of this very useful model to operate independently slits must be made along the lines QK, SL, KR and LT respectively. Right-angled bends are then arranged for along the lines KK, LL, MM, and NN, while other similar bends are made along the lines IKLM, MLKI, and also along the shorter lines OO and PP. Adhesive is only required on the one portion already indicated.

The following dimensional details relate to this model :—

Height of front, $4\frac{1}{4}$ ins. ; width of front, $1\frac{1}{8}$ ins. ; depth of side, $1\frac{1}{8}$ ins. ; total weight uncharged, rather under $\frac{1}{4}$ oz.

This model usually comes into the market paper-covered on the outer side only, a point which box and packet makers should carefully note. Printing in one or more colours may be demanded on the outer portions marked C, A, C, B, F, F, in the drawing, the concealed portions, E, E, H, H, and G, G, carrying no printing of any kind, as a rule, the same thing applying to the inner sides of all portions of the packet.

CHAPTER V

rs of boxes of different types are required le, and it may, therefore, be useful in to consider a couple of these. Most ary sorry to have to sell their wares in 7, and although a few may be doing so hanced cost of strawboard boxes since t should be made by box-making firms iece boxes amongst drapers, and to le terms to those wholesalers who can 7 at a time.

STING DRAPERS' BOX DESIGNS

box made in two pieces designed to idies' hose. The upper drawing depicts ly need be described in detail, as the cted in the lower drawing is similar in that its base is a shade smaller, and its rather larger than is the case with the ns of the lid.

rawing, therefore, A is the top of the e sides, and C and C are the lid ends. are made along the lines DD, DE, EE,

of B, B, and C, C. Neither portion carries print of any kind, as the packers attach their own printed label to one end of the trough.

Fig. 21 shows the lid only of another very widely-used box in the drapery industry, namely, one in which ladies'

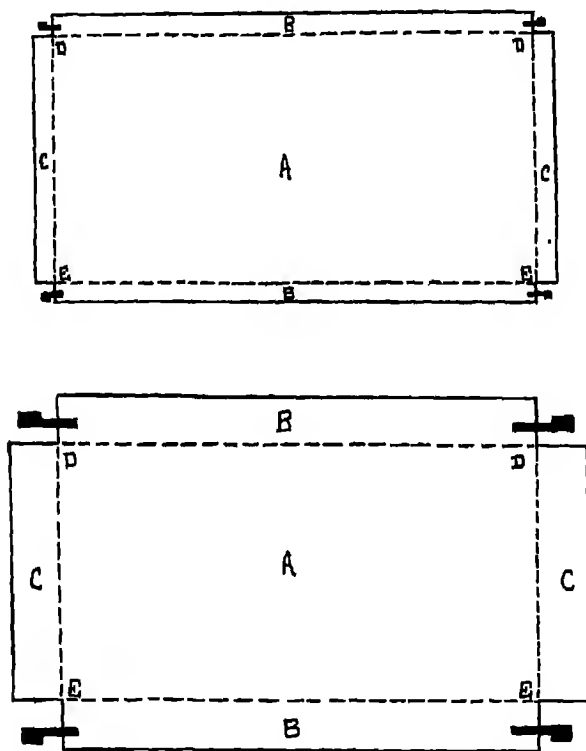


FIG. 20.—TWO-PIECE BOX TO HOLD HALF-DOZEN LADIES' HOSE.

pull-overs are sold. In this drawing A is the top of the lid, B and B are the lid sides, and C and C are the lid ends. The four shaded portions marked D, D and E, E, are the corner flaps, which are of extra stout heavily-glued paper. Right-angled bends are required, as will be expected, along the lines FF, FG, GG, and GF.

The trough is exactly similar to the lid, except that it is

a shade smaller. Neither the trough nor the lid are required to be printed, as the packer, as in the former instance, attaches his own printed labels, but this time to the lid instead of to the trough. The lid is paper covered on the entire portions of its outside, and in some cases the trough is similarly paper covered, but more usually the outer portions of the sides and ends only are concealed in this way.

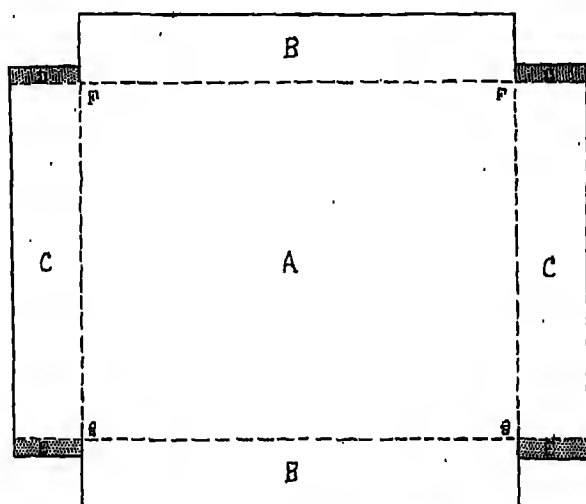


FIG. 21.—LID ONLY OF TWO-PIECE DRAPERS' BOX TO CONTAIN LADIES' PULL-OVER.

The following dimensional data should be specially noted :—

Total length, $12\frac{3}{4}$ inches ; width, $10\frac{1}{2}$ inches (*i.e.*, the model is not square) ; depth, 2 inches ; total weight uncharged of the lid only, 4 ounces. As the trough weighs about the same, this is rather a heavy model.

SINGLE-PIECE MILK CHOCOLATE PACKET

Many types of packets have been designed to contain different makes of chocolate, but I should like to draw special attention to one which can be produced in a single piece, and which is very largely used by certain manufac-

turers of milk chocolate at the present time. This packet is sketched out in Fig. 22, and the following is a brief description of it.

The top of the packet is shown at A, and the base at C, the strips marked B and D being the sides respectively, and E being a concealed flap. Each end is in two distinct portions, the inner ends being depicted at F, F, and the outer ends at G, G. These last are extended by small flaps H, H, one of the corners of each of which is rounded as

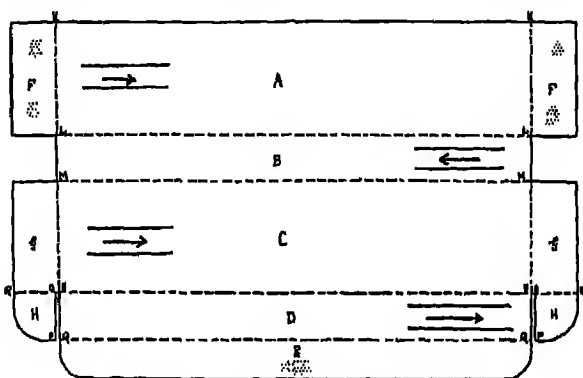


FIG. 22.—USEFUL SINGLE-PIECE DESIGN FOR MILK CHOCOLATE PACKET MAKERS. NOTE: THE ARROWS DEPICT THE DIRECTION OF THE PRINT ON THE VARIOUS PORTIONS OF THE PACKETS.

shown, these being separated from the side D by specially cut channels indicated at PQNO, and QPON respectively.

A considerable amount of bending is required in the case of this model, long bends being made along the lines LL, MM, NN, and QQ, medium bends being made along the lines KL, MN, NM, LK, and short bends being made along the lines RO and OR. Adhesive is required on the shaded portions above and below F, F, and also on the other shaded portion below the letter E.

The dimensional details relating to this model are set out below :—

Total length, $6\frac{3}{4}$ inches ; width, $1\frac{1}{2}$ inches ; depth, $\frac{1}{8}$ inch ; total weight uncharged, just over $\frac{1}{4}$ ounce.

As to finishing, this model forms an example of the

embossed type of container, *i.e.*, the thin card of which it is manufactured is directly embossed during the printing operation. It is usually paper covered on the outside only, even the concealed portions of the ends being treated in this way. It may be demanded printed in one or more colours.

TWO-PIECE STATIONERS' BOX

Fig. 23 depicts a two-piece box in which a popular type of metal paper clip is sold by stationers. Both portions are roughly sketched out, but only the lid or cover need be described in detail, as the trough portion is very similar to it, except that its base is a shade smaller than the top of the lid, and that the other portions are a shade larger.

Taking the lid or cover, which is illustrated in the top drawing, A is the lid top, and B and B are its sides. These are extended in both directions as shown, by small, almost square, flaps D, D and E, E. The lid top is extended in both directions as shown at C, C, thus forming the ends. In order that these may be folded, it is necessary to slit them away from the flaps D, D and E, E, this being done along the lines JG, GJ, KH, and HK respectively.

Right-angled bends are then arranged for along the lines GG, HH, and also along the slightly longer lines FGHJ, and IHGF.

No adhesive is required to put this model together, the portions D, D, and E, E, being punched through on to the ends C, C with a special type of metal fastener which is not illustrated in the diagram. The holes made for the insertion of these in all six portions are, however, roughly indicated.

Now as to dimensional data, the length of this model is $2\frac{3}{4}$ inches, its width being $1\frac{1}{8}$ inches only, while its depth is approximately 1 inch. The total weight uncharged, taking the two portions together, but weighing without metallic fasteners, is $\frac{1}{2}$ ounce.

The finishing of this model is a simple matter. The whole of the outer portion of the trough, including the concealed ends, is paper covered. The whole of the outer portion of the lid or cover is also paper covered. No print of any kind

is required on either side of the trough portion, but print of from one to three words and upwards may be demanded in

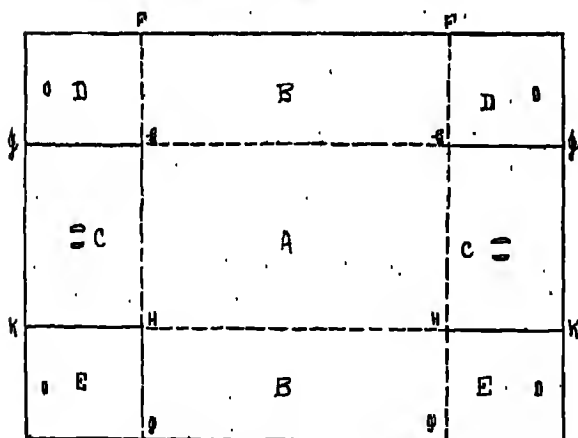
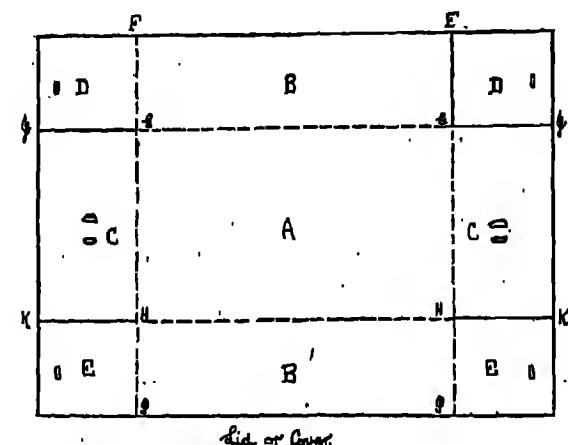


FIG. 23.—TWO-PIECE BOX FOR SALE OF METAL PAPER CLIPS.

the case of the lid; on all the seven portions A, B, B, D, D, and E, E.

A MATCH BOX MADE OF CARD AND WOOD

Fig. 24 illustrates a model largely used in the match industry, which is manufactured both from wood and from

card. It may be said, however, before describing it, that stout card might quite as well be substituted for the wood portion, which is depicted in the lower drawing by the long strip marked E, D, E, D. Box makers, therefore, who cannot get suitable wood might consider manufacture from card only.

The top drawing depicts the cover portion, which is cut

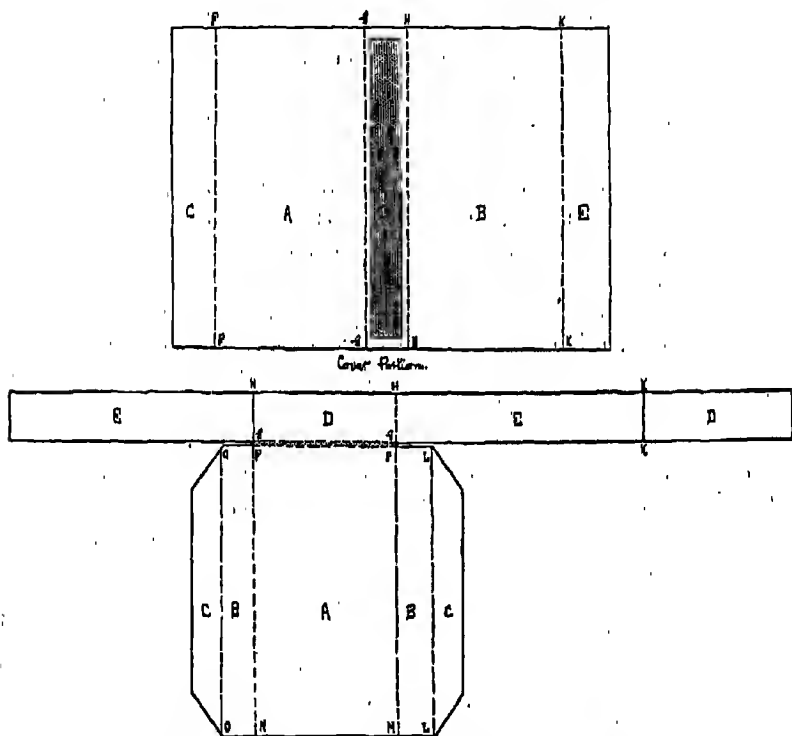


FIG. 24.—MODEL IN USE IN THE MATCH INDUSTRY MADE OF WOOD AND CARD.

out on the usual lines in the shape of a rectangle. A is the top of the cover, and B is its base, C and D being the visible sides, while E is a concealed side which is not attached to the back of C by means of adhesive, but joined thereto by a paper covering which conceals the whole of the outer portion of the cover. A strip of sandpaper for the matches to be struck on is indicated by the shaded portion of D, but

certain firms may insist on this portion being glued only, and then sand dusted.

Right-angled bends are required along the lines FF, GG, HH, and KK.

Now with regard to the trough portion, this ought really to be shown in two pieces, but has been drawn in one so as to show the mode of attachment. The main trough consists of a base A, two sides B, B, and two side flaps, C, C. Right-angled bends are made along the lines OO, FN, FM, and LL.

One of the trough ends is already in position, this being shown at D. The outer sides of the trough are indicated by the portions E and E, while the other end is that portion marked D beyond the second side E. After making right-angled bends along the lines HG, HG, and KK, the ends and the extra side are attached to the trough by means of heavily gummed paper, a portion of which is shown by the shaded strip between the lines GG and FF. The left-hand side E and the right-hand end D are also attached to each other after folding by means of gummed paper.

The main trough portion is completely paper covered, both on its outer and inner portions, apart from the use of this material for joining the extra sides and ends thereto. Printing here is only demanded on the upper or outer portions C, C, and only amounts to two or three words on each.

The following dimensional data should be specially noted:—

Total length, $3\frac{1}{8}$ inches; width, $1\frac{7}{8}$ inches; depth, $\frac{9}{16}$ inch; total weight uncharged, taking both portions together, just over $\frac{1}{4}$ ounce.

CHAPTER VI

READERS are almost sure to come across examples of two or more boxes somewhat similar in general type being enquired for by operators of entirely different trades. Such box and packet production is, of course, very sound business, as by means of small modifications in the models or machinery it is possible to serve several trades' requirements instead of the needs of one class of industry only.

Two actual instances of this are very forcibly brought home in the present chapter, as a careful examination of the pairs of illustrations, Figs. 25 and 26, and Figs. 27 and 28 will prove. These boxes are undoubtedly similar in general type, but it is a big stride to go from Christmas calendar manufacturers to producers of silk stockings, and again it is an equally big stride to go from the drug industry which produces acetyl-salicylic acid in tablet form to the confectionery industry or toffee manufacturer.

TWO-PIECE BOXES FOR CALENDARS AND SILK STOCKINGS

Fig. 25 shows the cover only of a very popular box in which Christmas calendars are sold. The trough is exactly similar to the cover, the base obviously being a shade smaller than the lid top, while other differences will be pointed out directly, although they are very slight. Taking the various parts of this model, A is the lid top, B, B are its sides, and C, C its ends. Right-angled bends are made along the lines DD, DE, EE and ED. The corners are joined by the usual heavily gummed stout paper corner pieces which are not shown in the diagram.

The dimensions of this model are as under :—

Total length, 8 ins. ; total width, 6 ins. ; total depth, $\frac{3}{4}$ in. ; total weight uncharged of the cover only, just over

1½ ozs. The trough portion weighs approximately the same, and this is not, therefore, as heavy a model as some we have had.

Now as to the finishing of this very handy model, the lid is paper-covered over its entire outer surface, yellow glazed paper being employed. This is turned over onto the inner sides and ends to about half their depth as shown by the marginal lines FF, GG, HH and KK in the diagram, The trough portion is white paper-covered on its outer base, and the outer sides only of its sides and ends (B, B, and

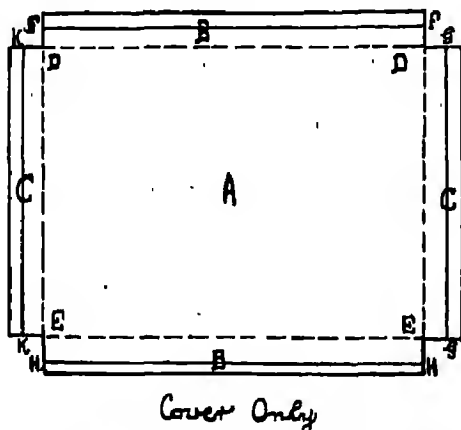
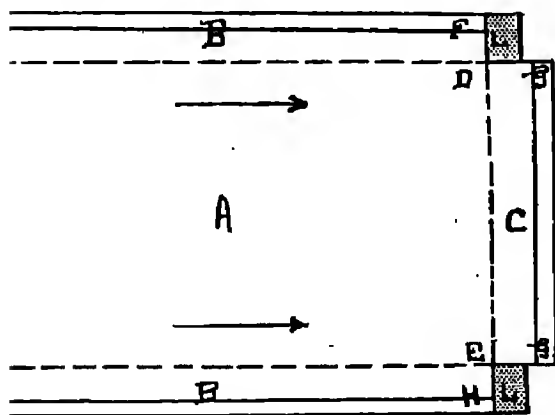


FIG. 25.—TWO-PIECE BOX FOR SALE OF CHRISTMAS CALENDARS.

C, C) are covered with yellow paper, similar margins being employed to those illustrated in the lid. The trough is unattached to the cover except by the slight grip of the latter, and no print of any kind is called for on either portion of this box, as the calendar manufacturers paste on to it their own label.

Silk stockings have already an enormous sale, and in view of the increasing popularity of artificial silk the demand for them is likely to be even greater in the future than it is now. Box makers should certainly include a silk stockings box in their programme, as in view of the above there is plenty of money to be made out of it.

the cover only of a popular silk stockings box of the lid, and B and B are again the lid ends. The corner flaps indicated by the letters L, L, L, L are of thin heavily gummed paper, and are attached to the two ends in the lid without any additional wire stitching. Right-angle lines DD, DE, EE and FF, GG, HH and KK show the inner lid's paper covering, which, by the way, is the outer surface as in the former instance.



Cover Only.

THE BOX IN WHICH LADIES' SILK STOCKINGS
ARE SOLD.

In this diagram indicate the main directions of the cover. The portions containing no arrows carry no print, and the manufacturer's printed label.

The construction is exactly similar to the lid, though, of course, smaller. Instead of being covered with the lid is, white glazed paper is used throughout the portions.

As to the weight of this very excellent and much-used box:—

Height, $1\frac{1}{2}$ ins.; total width, $6\frac{1}{4}$ ins.; total depth, 10 ins.; weight, uncharged, taking the lid only, $1\frac{3}{4}$ ozs. The lid weighs about the same as the cover.

TWO SINGLE-PIECE PACKETS

Fig. 27 shows a very handy single-piece packet in which tablets of compressed acetyl-salicylic acid are sold for use in influenza and other feverish conditions. This, it should be noted, is an upright packet, whereas the model depicted in the next drawing is a flat packet, *i.e.*, one stands on its base I, and the other lies on its base A.

The various parts of the model illustrated in Fig. 27 are briefly commented upon below.

The front of the packet is shown at A, and the back at

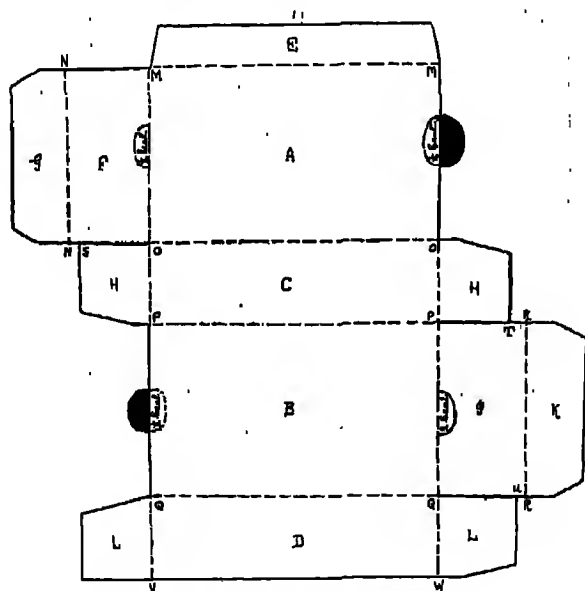


FIG. 27.—SINGLE-PIECE PACKET FOR SALE OF ACETYL-SALICYLIC ACID TABLETS.

B. C and D are the two sides, and E is the attachment flap, which is heavily covered with glue or other adhesive before being attached to the back of D, so that its inner margin MM runs along the outer margin of D shown at VW. The sides are extended in both directions by curiously shaped flaps H, H, and L, L, while the back is extended to the right by a base I, and a base flap K, and the front is extended to the

left by a top F, and a top flap G. Two stout paper seals, heavily gummed, are attached to A and B in the positions shown, the final positions after charging being shown to the right of F, and to the left of I. Right-angled bends are arranged for along the lines MM, OO, PP, and QQ, shorter but otherwise similar bends also being required along the lines MOP, NN and RR; a longer right-angled bend being made along the line OPQW; and a very short but similar bend is made along QV. Slits are required along the lines SO, PT, and QU, to make the various flaps operate independently.

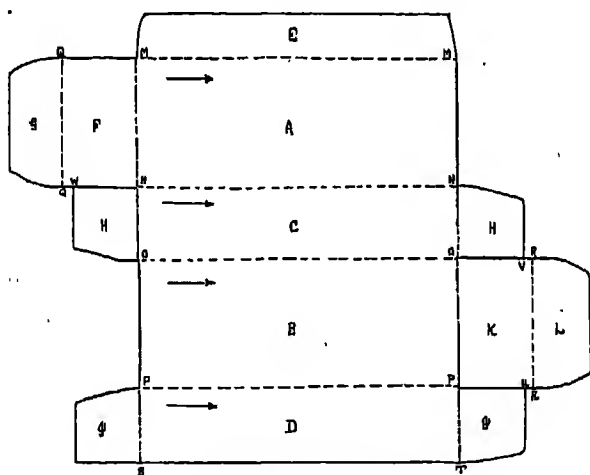


FIG. 28.—SINGLE-PIECE TOFFEE PACKET.

The following dimensional data relate to this model :

Total height, $2\frac{7}{8}$ ins. ; width of front, $1\frac{3}{4}$ ins. ; depth of side, $\frac{7}{8}$ in. ; total weight, uncharged, rather under $\frac{1}{4}$ oz.

As to finishing, this model is paper covered on the entire surface of the outer portions only, and is usually demanded printed in one colour on A, C, B, D, but not elsewhere.

Fig. 28 shows a model much used by certain toffee manufacturers. It is a flat and not an upright model, and its production presents few, if any, technical difficulties.

In this case A is the base of the model, and B is the top, C and D being the sides, while E is the attachment flap, which, after glueing, is attached to the back of D so that its

inner margin MM corresponds with the outer margin ST of D. The base is extended to the left by an end F and an end flap G, while the top is similarly extended in the other direction by an end K and an end flap L. The sides are extended in both directions by flaps H, H and I, I, very similar in character to those in the previous drawing. Cuts are made along the lines WN, OV and PU to enable the different parts to operate independently.

Long right-handed bends are made along the lines MM, NN, OO and PP. Rather shorter bends are made along the lines NOPT and MNO; still shorter right-angled bends being made along the lines QQ and RR; while a very short right-angled bend is required along the line PS. The ends are unsealed, and adhesive is only required along the strip E as already mentioned.

The following are dimensional details:—

Total length, $3\frac{1}{2}$ ins.; total width, $1\frac{1}{2}$ ins.; total depth, $\frac{7}{8}$ in.; total weight, uncharged, exactly $\frac{1}{4}$ oz.

The finishing of this model is a simple matter. It is covered with yellow paper over its entire outside surface, and may be demanded printed in one or more colours. The main direction of print is shown by the four arrows. In some models the ends F and K also carry print.

TWO-PIECE ICE-CREAM BRICK BOX

The introduction of cardboard boxes has virtually revolutionised the sale of ice-cream, and it would be difficult indeed to market the now very popular bricks cheaply enough without this aid. Some box makers, however, look down on the ice-cream brick box, imagining that the price paid for it will be cut so fine that practically all profit may be eliminated. This is far from being the case. While the demand is mainly in the summer, as goes without saying, there are plenty of other models which can be operated upon during the winter months with only a slight adjustment to the machines.

Fig. 29 shows a two-piece box in which ice-creams are sold by the thousand at almost every seaside resort in a certain county, and probably in many other watering places as

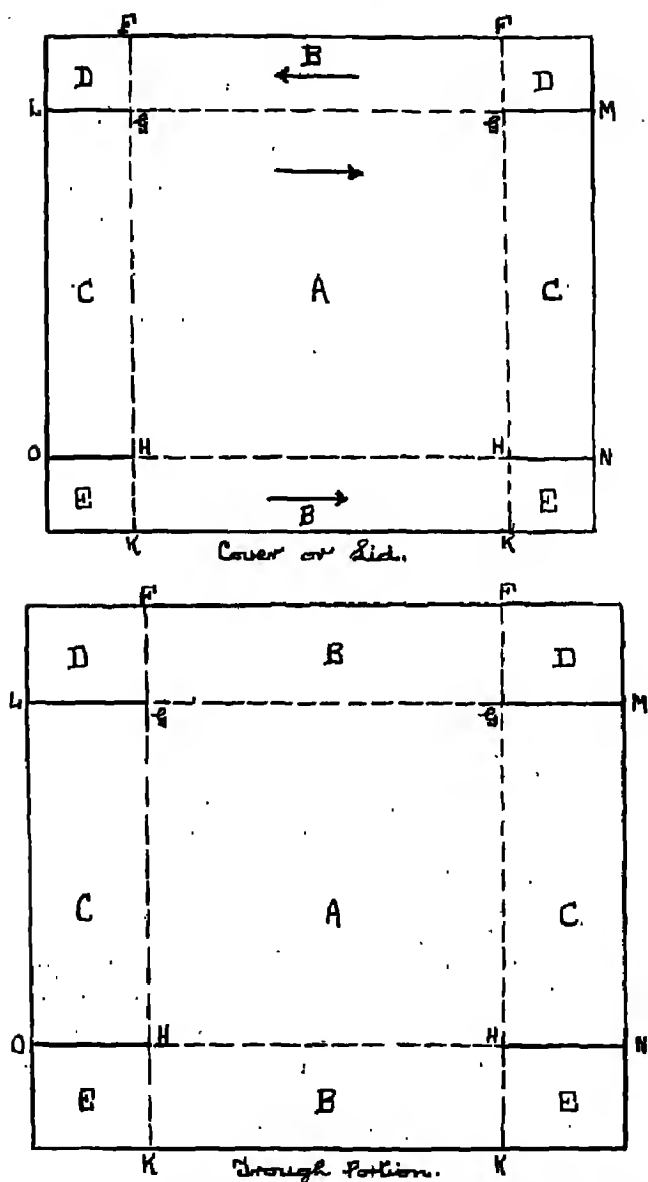


FIG. 29.—POPULAR TWO-PIECE BOX FOR ICE-CREAM BRICKS.

well. The cover or lid only will be described, as the trough portion is very similar to it, though its base A is a shade smaller than the corresponding portion of the cover, while the other parts are a shade larger as shown.

Taking the cover or lid, A is the lid top, B and B are the lid slides, and C and C are the lid ends. The lid slides are extended in both directions by small, almost square, flaps indicated at D, D, and E, E. If the lid is cut out, as it

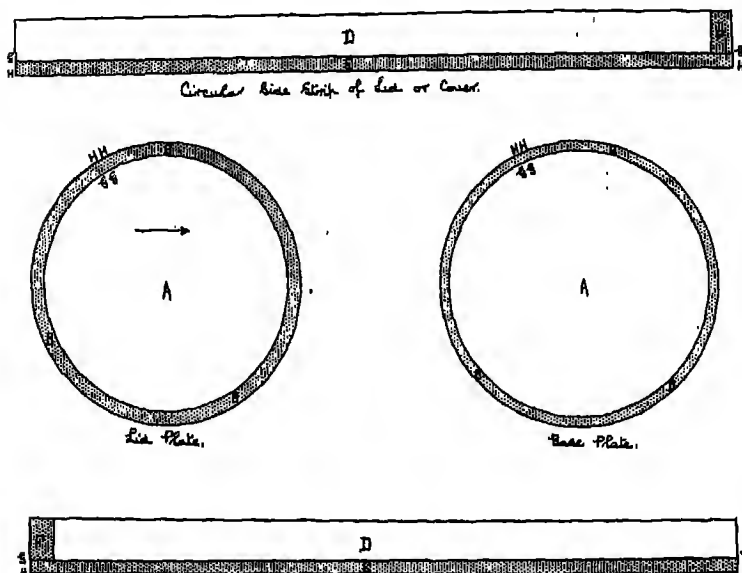


FIG. 30.—POPULAR FOUR-PIECE CIRCULAR MODEL FOR SALE OF CHOCOLATE PASTILLES.

probably will be, in a small, almost square, plate, the first important step will be to make slits along the lines LG, GM, OH and HN, in order to liberate the ends C, C from the rest of the cover. Right-angled bends are then made along the lines FGHK, KHGF; while a couple of shorter ones are also required along the lines GG and HH. Special adhesive is required on D, D and E, E, and these flaps after bending are attached to the inner side of the corresponding ends C, C.

Dimensional details are of a simple character in this case, and are given approximately below :—

Total length, 2 ins. ; total width, 2 ins., *i.e.*, the lid is a square ; total depth, $\frac{3}{4}$ in. ; total weight, uncharged, taking the two portions together, $\frac{1}{4}$ oz.

The finishing of this model is a matter of the greatest importance. As we all know, ice-cream is unsaleable in ordinary cardboard containers, as it melts and soaks into them with extreme readiness. Every portion of this model must, therefore, be thoroughly greased, or one ought to say, completely waxed on the entire outer and inner surface, including the bends and edges made by the slitting. Special adhesives are desirable in view of this, as the ordinary ones are hardly satisfactory for waxed models. Then, again, a specially prepared printing ink is desirable, otherwise users are certain to find the boxes disappointing. The main directions of print on the three principal portions of the lid are shown by the arrows in the drawing. This is on the outer surface only. The trough portion carries no print of any kind on any part.

FOUR-PIECE CIRCULAR CHOCOLATE BOX

Fig. 30 shows a very useful and popular model in four parts which is much used for the sale of chocolate pastilles. The diagram is practically self-explanatory, and hence only a brief description seems to be called for.

The left-hand circle in the illustration depicts the lid plate, and the right-hand circle the base plate. The upper strip is the circular side strip of the cover, while the lower one is the similar portion of the trough or base. These strips, when bent to form circles, are easily attached to the lid plates and base plates respectively, as each strip carries a band of heavily gummed paper shown by the shaded portions E, E. The two ends of the strips are joined together by a stout heavily gummed piece of paper, shown by the shaded portions F, F, and after attaching the side strip of the cover to the lid plate, the line GG corresponds with the inner margin of the shaded circle BBB, while the outer line HH corresponds with the outer boundary of the shaded circle BBB, exactly the same thing applying in the case of the base plate and its circular side strip.

CHAPTER VII

IN previous chapters I have called attention to the fact that pairs of models somewhat similar to each other in appearance are often required by totally different industries. A further instance is furnished in the first couple of drawings given in the present chapter. At first sight they appear to be exceedingly similar, but it is a far cry surely from the electric lamp industry to the tobacco trade, though the first drawing is in use in the former industry, while the latter is inquired for by operators of the second. Small adjustments of plant, however, enable boxmakers to produce both with almost equal facility, and as the demand for each is a large one, arrangements should be made for the rapid execution of orders running into five or six figures.

INTERESTING SIMILAR SINGLE-PIECE EXAMPLES

Fig. 31 depicts a single-piece packet extensively employed by a large firm of electric lamp manufacturers. This is an upright packet and not a horizontal example, and its various parts are briefly mentioned.

The back of the packet is shown at A, the strip marked D being the heavily gummed attachment flap. B is the front of this model, and C, C, are its two sides. The back is extended to the left by a top E and a top flap F, while the front is extended to the right by a base G, and a base flap H. The sides are extended in both directions, but boxmakers should specially note the shape of these subsidiary flaps I, I, and K, K, otherwise the model will not open and close readily.

Right-angled bends are required along the lines LL, MM, NN, OO, QQ, LMN, OP, PONM, and TT. To release the various portions in order to secure their independent operation, cuts or slits must be made along the lines RM,

NS, and OU. Print is required on the outer portions only in the direction of the arrows, and only on those portions bearing arrows.

The dimensions of this model are as follows :

Total height, 7 inches ; width of side, $3\frac{1}{2}$ inches ; width of front, $3\frac{1}{2}$ inches, *i.e.*, the base is a square ; total weight uncharged, $1\frac{1}{2}$ ozs. Cheap buff card can be used for its

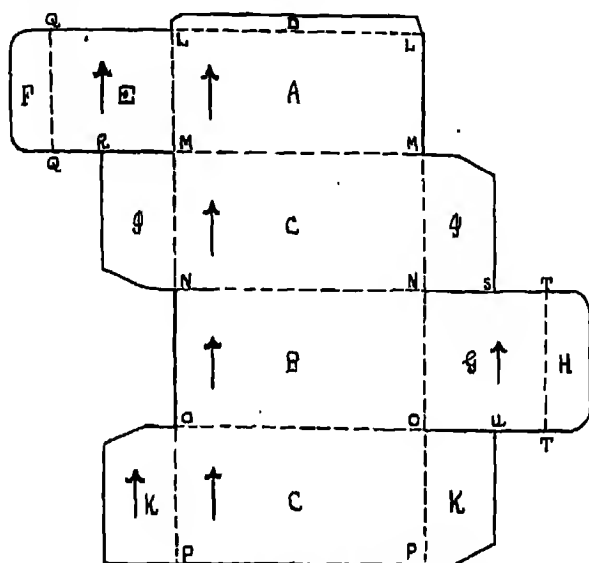


FIG. 31.—SINGLE-PIECE ELECTRIC LAMP PACKET.

production, as the model is usually paper covered on the outside.

Fig. 32 shows a horizontal single-piece carton, in which packets of cigarettes are sold by tobacco firms to retailers. In this drawing A is the top and B is the bottom, C and C being the two sides, and D the junction flap, which is heavily glued and attached to the back of the lower side C so that its inner margin LL corresponds with the outer margin of C indicated by PP. While the base is extended to the right by an end G, and an end flap H, the top is extended to the left by an end E, and an end flap F. The sides are extended

in both directions by small flaps I, I, and K, K, the shapes of which again should be specially noted. In order that the model shall open easily, a thumb-hole V is made as shown in the top A.

Right-angled bends must be arranged for along the lines LL, MM, NN, OO, QQ, LMN, OP, PONM, and TT, while slits are required to ensure independent operation of the various parts along the lines RM, NS, and OU. The arrows depict the portions on which print is usually demanded,

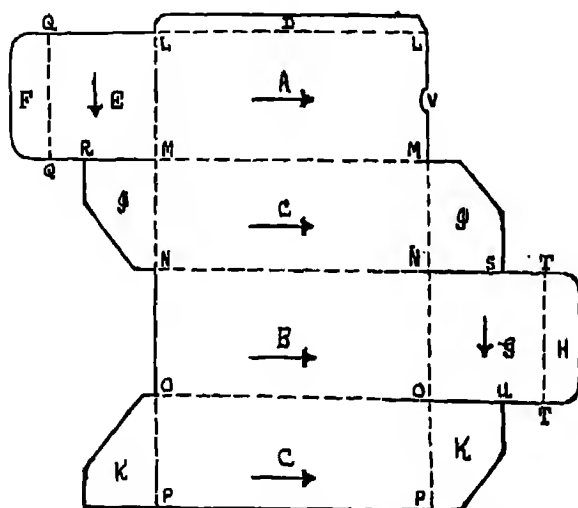


FIG. 32.—SINGLE-PIECE CIGARETTE PACKET CARTON.

and also the direction of the lettering, although in many examples the card itself bears no print, its outer surface being entirely covered by a manufacturers' printed paper label.

With regard to dimensional data, the total length of this model is $7\frac{1}{2}$ inches, the total width being $3\frac{1}{2}$ inches, and the total depth 3 inches (*i.e.*, in this case the end is not quite square). The total weight uncharged is just under $1\frac{1}{4}$ ozs.

From the above brief account it will be now realised that these two models are not identical. They are, however,

sufficiently similar to be produced by the same machines quite easily after making several sundry small adjustments.

MEDIUM SINGLE-PIECE MODELS

Turning now to models which are smaller in size and of lower capacity than those just described, Fig. 33 illustrates one of the most interesting single-piece paper fastener or clip boxes. This model holds one hundred of the fasteners,

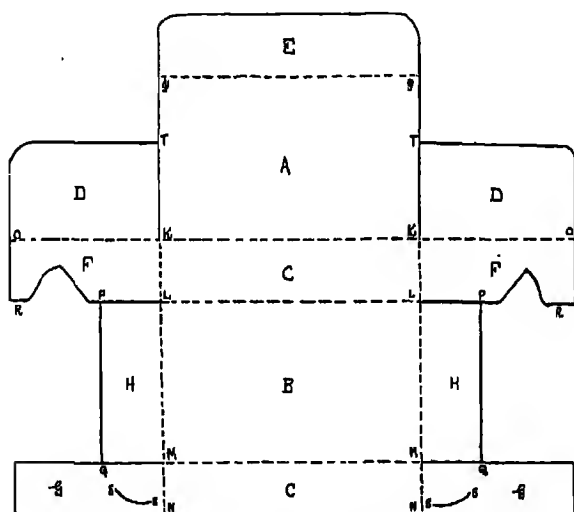


FIG. 33.—SINGLE-PIECE PAPER CLIP BOX.

the length of which is about an inch, and it does not require the use of adhesive on any part of it.

Taking the various parts in turn, A is the top of the box, and E is the top flap. B is the base, and C, C, are the sides, the front or top flap E making one side double. The base is extended in both directions by rectangular ends H, H, the lower side C being extended by a couple of rectangular flaps G, G, both of which are slitted as shown at SS, SS. The other side C is extended in both directions by a couple of curiously shaped flaps, F, F, each having a nose R, and R at its end. These two flaps are each ~~extended in an~~

upward direction by a couple of larger sections D, D, one corner of each of which is rounded as shown.

Right-angled bends must be arranged for along the lines II, OKKO, LL, MM, KLMN, and NMLK. Cuts or slits must be made along the lines TK, KT, PL, PL, QM, QM. In folding this packet, H is first turned up, G is then put behind it, F is then turned on to it, fitting the nose R into the slit SS, and finally D is turned over so that it fits under the top A. Cheap buff card can be used in the manufacture of this line, and as to finishing, it is usually supplied paper-

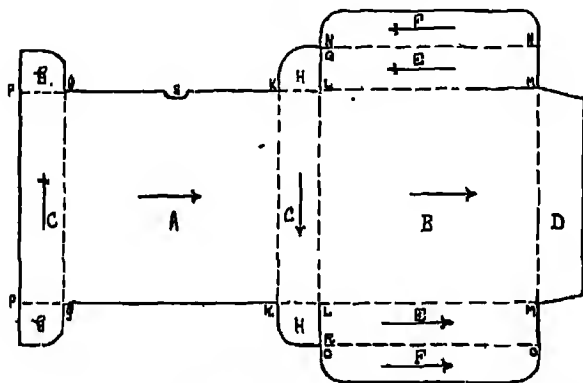


FIG. 34.—SINGLE-PIECE CUBE BLOCK CHOCOLATE CARTON.

covered on the entire outside only. Printing is demanded on A, C, C, F, and F.

Dimensional data relating to this very interesting model are now given :—

Total length, 3 inches : total width, $1\frac{3}{4}$ inches ; total depth, $\frac{3}{4}$ of an inch ; total weight uncharged, $\frac{1}{2}$ of an ounce.

Fig. 34 shows a single-piece packet or carton which has recently come into use in the chocolate trade. In this drawing A is the top, and B is the bottom, C and C being the sides, while D is the attachment flap, which, after being heavily gummed, is attached in the usual way to the back of the left-hand side C. The base of this packet is extended in both directions by two ends E, E, as shown, and these in their turn are extended by two end flaps F, F. The

sides C, C are each extended in both directions by small subsidiary flaps G, G, and H, H, the outer corner of all being rounded off as indicated.

Right-angled bends are required along the lines II, KK, LL, MM, PI, PI, NN, KLM, MLK, and OO. Cuts must be made along the lines LR, LQ, so that the flaps H, H, may operate independently. In order that the carton or packet may open easily, a thumb-hole S is provided in the top A.

Printing is required in various directions, and on most portions of the packet. The actual parts which must carry print and the direction in which the lettering is to be set are indicated by the arrows. Printing may, in addition, be demanded in several colours, but this is limited to the outer portion of the carton only.

Dimensional data are as under :

Total length, $3\frac{1}{4}$ inches ; total width, $3\frac{1}{4}$ inches (*i.e.*, this packet is square) ; total depth, $\frac{3}{4}$ of an inch ; total weight uncharged, just under $\frac{1}{2}$ an ounce.

SMALLER TWO-PIECE SIZES

To conclude the present chapter, I am illustrating a couple of smaller sizes. Fig. 35 illustrates a two-piece box in which jewellers supply silver watches. The lid only need be described in this case, and, as will be gathered, A is the top of the lid, B and B are its sides, and C and C are its ends. The corners are joined by the usual stout heavily gummed paper strips not illustrated in the drawing, and both the lid and the trough portions are paper-covered over their entire outer surface, the inner margins of the paper covering being shown by the shaded portions on the sides and ends. The lid alone carries print, the direction of this being indicated by the arrow.

Right-angled bends are required, as will be expected, both in the case of the lid and the trough portions along the lines DD, DE, EE, and ED. Strong card is essential for the satisfactory manufacture of this model.

The following are dimensional data relating thereto :—

Total length, $3\frac{1}{4}$ inches ; total width, $2\frac{3}{8}$ inches ; total

depth, $1\frac{1}{8}$ inches ; total weight uncharged, taking the two portions together, $\frac{1}{2}$ an ounce.

Fig. 36 shows a small model that is likely to be much

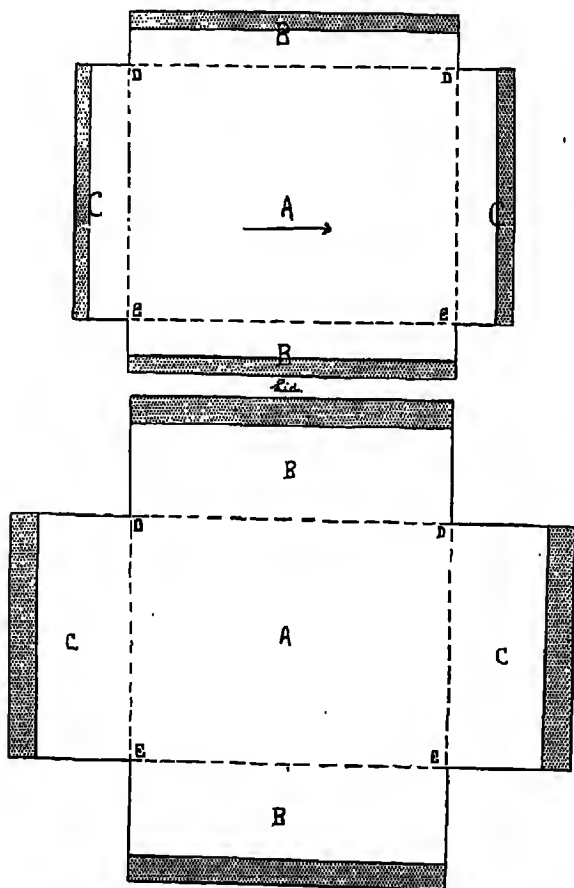
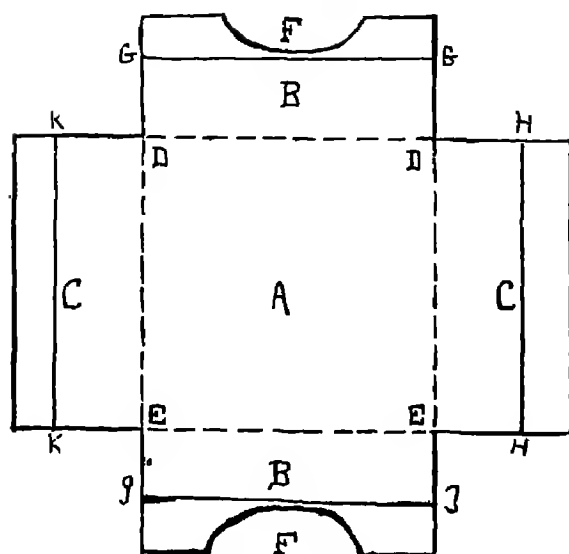


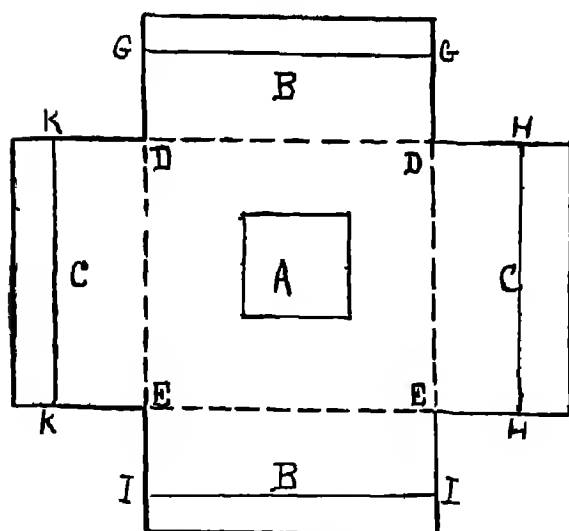
FIG. 35.—SMALL TWO-PIECE JEWELLERS' WATCH BOX.

asked for with the increasing use of dictating machines in business offices. In it are supplied the small textile air filter discs for the mouthpieces of these machines.

The top diagram illustrates the lid of this box, A being its top, B and B its sides, and C and C its ends. It will



Lid.



Trough.

FIG. 36.—SMALL TWO-PIECE TEXTILE AIR FILTER BOX.

be noticed that a couple of thumb-holes F, F, are provided in the sides B, B.

Taking the trough, A is the base of the trough, B and B are its sides, and C, C are its ends; no thumb-holes being necessary in this portion, none are provided. Right-angled bends in both cases are made along the lines DD, DE, EE, and ED.

The lid of this model is paper-covered on its entire outer surface, and the paper covering is used as the means of joining the corners. The inner margin of this paper covering is shown both in the case of the lid and the trough by the lines GG, II, on the sides, and the lines KK, and HH on the ends. Excepting for the small square in which the letter A is actually placed in the lower drawing, the trough is similarly paper-covered over its entire outer surface. No print of any kind is demanded, as the firms stick their own labels on to the top of the lid.

The following are the dimensions of this neat little box:—

Total length and total width, $1\frac{1}{2}$ inches each (*i.e.*, this box is an exact square); total depth, $\frac{3}{4}$ of an inch; total weight uncharged, just under $\frac{1}{4}$ of an ounce, weighing the two pieces together.

CARDBOARD BOX MANUFACTURE

CHAPTER VIII

I HAVE already called attention in previous chapters to the fact that two boxes outwardly similar in appearance may be wanted by two entirely different trades. In the present chapter this is taken a step farther, as we have no less than three boxes which are outwardly somewhat similar, finding application in three trades which widely differ in character. It is not proposed to continue even further still on the same lines, as otherwise a whole chapter would be devoted to describing boxes possessing only small differences in shape, size, etc., although the trades making use of them might in every case be different. Box makers, however, should not overlook that possibility, as if they get half a dozen or a dozen apparently similar models required by different trades, they can make an enormous amount of money out of them. Adjustments, as a rule, are so easily made in machines of to-day that with an assured demand for these, the more complicated models can often to a large extent be left alone.

POPULAR SINGLE-PIECE MODELS

Before describing the three boxes above mentioned which are somewhat similar, I want to draw attention to three others, and the first two of these are single-piece models. Fig. 37 illustrates a box in which packets containing tubes of dental paste are displayed on the counters of drug stores, etc. In this example, A is the top or major portion of the lid of the box, and B is the base. C, C are the front and back respectively, and E, E are the inner portions of the ends, which, as will be gathered, are double. The outer portions of the ends are shown by the four flaps F, G, H, I, by which the front and back C, C, are extended in both directions. The lid A is extended by a flap D, which, however, carries no adhesive.

The shape of the outer-ends F, G, H, I, should be carefully noted. The nose on H fits into the mouth of F, while the nose of G fits into the mouth of I. This box is, therefore, quite secure without the use of glue or wire stitching.

Right-angled bends are arranged for along the lines LL, MM, NN, OO, MNOP, and PONM. In order that the parts may operate independently, cuts must be made along

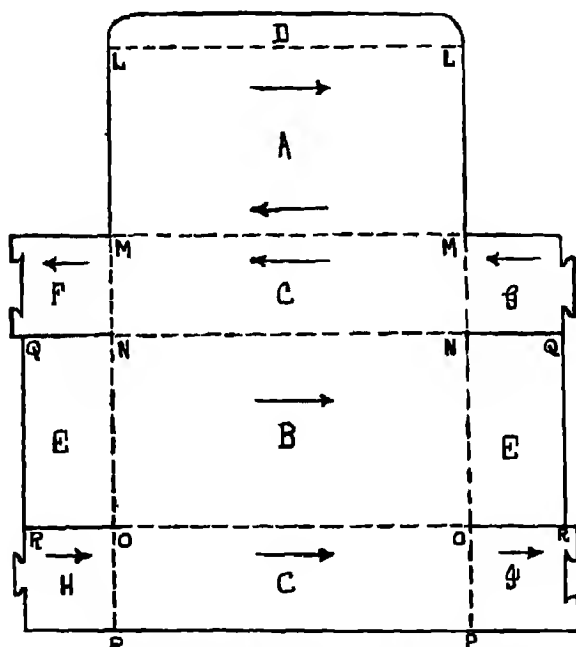


FIG. 37.—SINGLE-PIECE DENTAL PASTE DISPLAY BOX.

the lines QN, RO, RO, QN, and this box should be supplied paper-covered on the whole of the outer side or surface, while the inner surface of A and D are also paper-covered. Printing in more than one colour may be demanded, the upper arrow on A indicating the direction of the print on the inner side of the lid, while the lower arrow indicates the direction of the print on the other side. The remaining parts carrying arrows are printed on the outer surface only, the directions being those shown.

The following are dimensional data relating to this very useful model :—

Total length, $8\frac{3}{4}$ inches ; total width, $4\frac{1}{2}$ inches ; total depth, $2\frac{1}{4}$ inches ; total weight uncharged, just under $1\frac{3}{4}$ ounces.

Fig. 38 depicts a popular pharmacy model which is supplied to druggists, etc., in an unprinted condition. Its construction presents no difficulty whatsoever, and is broadly

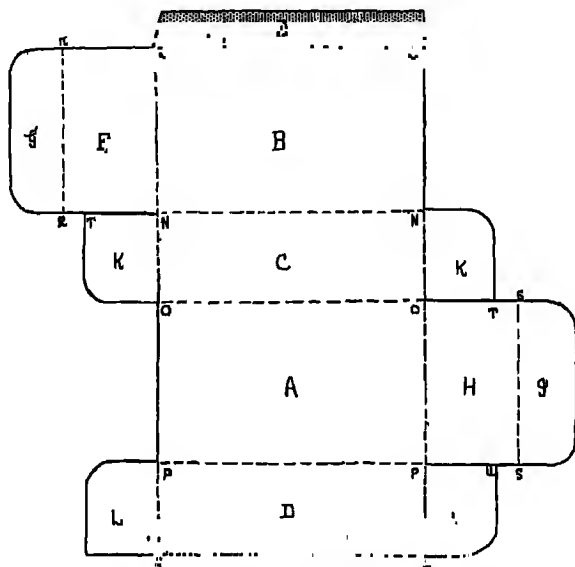


FIG. 38.—POPULAR UNPRINTED PHARMACY MODEL FOR TABLET MEDICINES.

the same as that of some which I have already described. The advantage of boxmakers supplying unprinted models is that pharmacists can then use the packet for the sale of small bottles of many different types of tablet medicines, pasting on to it their own small label. Photographic chemists can also employ it for the sale of compressed photographic chemicals of different kinds.

This model is an upright one, A being the front and B the back. C and D are its two sides, E is the attachment flap, which, after being heavily covered with adhesive, is placed

on the back of D so that it just covers the shaded portion of that part. The front of the packet is extended to the right by a top H and a top flap I, while the back is extended in the other direction by similar portions F and G, forming the base and the base flap respectively. Neither G nor I carry any adhesive, although in some cases models may be demanded with paper seals for closing purposes.

To secure the independent operation of the various parts, cuts must be made along the lines TN, OT, and PU, after which right-angled bends are arranged for along the lines MM, NN, OO, PP, RR, MNO, QP, QPON, and SS. This model is supplied paper-covered on the outer surface only.

The following are the dimensional data relating to the model:—

Total length, $1\frac{5}{8}$ inches; total width, 1 inch; total depth, $2\frac{5}{8}$ inches; or to put it another way, length measured along OP, $1\frac{5}{8}$ inches; height measured along OO, $2\frac{5}{8}$ inches; width measured along ON, 1 inch. The total weight of this packet uncharged is just under $\frac{1}{4}$ ounce.

FOUR TWO-PIECE PACKETS AND BOXES

Fig. 39 illustrates a two-piece cigarette packet, the base of which possesses a double bend. This enables the cigarettes to be removed even when the packet is full without damaging them in the slightest, whereas in the older models it was rather difficult to pull the first cigarette out as a rule without crushing it.

The upper drawing in this figure shows the cover portion, which is of the usual type, A being the cover top, and B the cover base, while C, C are the sides of the cover, the ends, of course, being open, and D is the attachment flap, which, after being heavily covered with adhesive, is attached to the back of B so that it covers the shaded portion of that part.

Right-angled bends are arranged for, as will be expected, along the lines EE, FF, GG, and HH, while the direction of the print, which is on the outer surface only, is that shown by the various arrows.

Now with regard to the trough portion, B is the base,

C, C are the sides, and D, D are the ends proper, while E, E are the end flaps. A is really a portion of the base, but on opening the packet it functions more as a portion of the end, although some will describe it as a base flap.

Right-angled bends must be arranged for along the lines FF, GG, HH, II, FG, GF, and KK. In the case of FG,

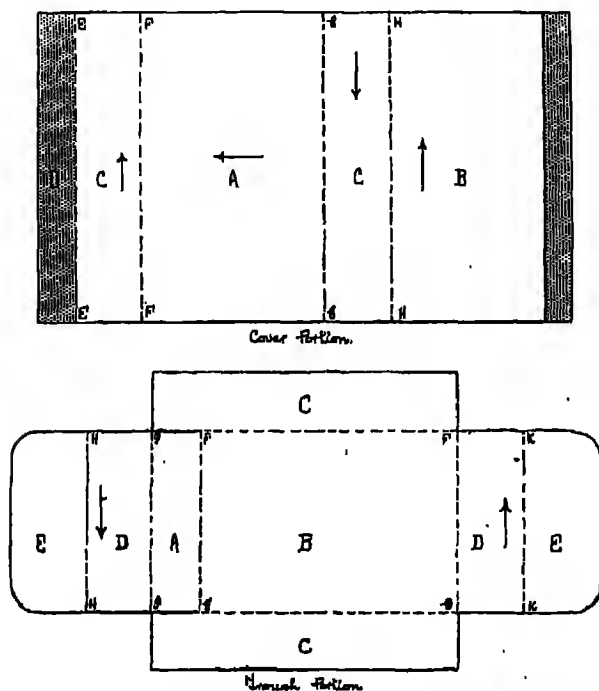


FIG. 39.—TWO-PIECE DOUBLE-BEND CIGARETTE PACKET.

the bend must be made so that it operates away from the centre of the trough, but all the other bends are towards the centre, as will be expected. The double bend cannot, however, be brought into play unless liberation slits are made along IF and IG. This portion of the packet is printed on the outer surface of the ends D, D, only, the direction of the lettering being that of the two arrows.

The dimensional details of this most convenient model are as under :—

Length measured along GG, 3 inches ; width measured along GF, $1\frac{3}{4}$ inches ; depth measured along GH, $\frac{5}{8}$ inch, all dimensions being those of the *cover*. This model comes into the market paper-covered on the outer surface of both portions only, while printing may be demanded in several colours. The total weight of this model taking both portions together is just under $\frac{1}{4}$ ounce in an uncharged condition.

We now come to the first of the three double-piece boxes already referred to, which are somewhat similar in character. Fig. 40 depicts a two-piece cardboard box in which babies' feeding bottles are sold. The upper drawing represents the cover, while the lower one is the trough of the box.

Taking the various parts in turn, A is the top of the cover, B, B, being the sides, while C, C are the ends. The same lettering has been used, as will be seen, for the various portions of the trough. Right-angled bends are arranged for in both instances along the lines DD, DE, EE, and ED. In order that the cover shall be more easily removable, thumb-holes are made as shown at F, F, in its sides B, B.

In the case of the cover, I have indicated the method of joining the corners, which is of considerable importance in dealing with fragile goods such as glass feeding bottles. While wire stitching may be favoured, in the present instance the corners are joined by means of four stout flaps of heavily gummed paper, the outer portions of which are illustrated. These corner flaps are, of course, concealed beneath a paper covering which is attached to the whole of the outer surface, both of the cover and of the trough. The inner margins of this paper covering are shown by the shaded portions both in the cover and the trough. As to printing, this may be demanded on A, B, B, C, C, in the case of the cover, the direction being that of the various arrows ; while with regard to the trough portion, it is usually only demanded on the sides B, B.

Dimensional data are now set out :—

Total length, $7\frac{1}{4}$ inches ; width measured along DE (the trough portion being, of course, just a tiny shade smaller), $3\frac{1}{8}$ inches ; total depth, $2\frac{1}{8}$ inches ; total weight uncharged,

taking the two portions together and reckoning the paper covering in, $2\frac{1}{4}$ ounces.

Fig. 41 shows a very useful two-piece box in which octavo

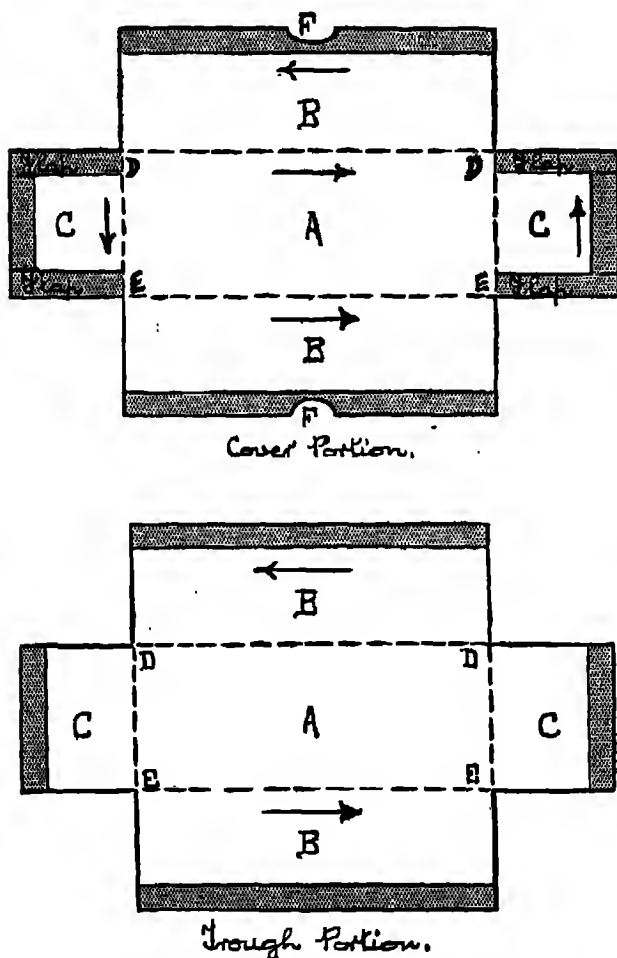


FIG. 40.—TWO-PIECE BABIES' FEEDING BOTTLE BOX.

envelopes are sold by stationers. It seems hardly necessary in the present instance to run through the parts again, as this drawing has been lettered similarly to the previous

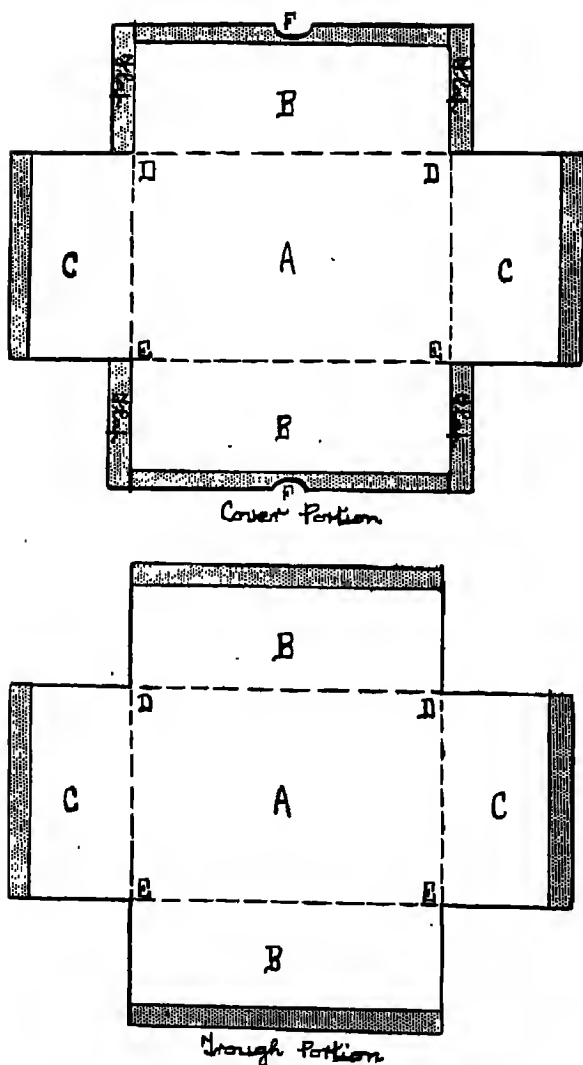


FIG. 41.—USEFUL TWO-PIECE OCTAVO ENVELOPE BOX.

one. The bends, which are full right-angles, are again the same, while the mode of attaching the sides and ends together is also similar, although in this case the attachment flaps need not be so strong. It may be pointed out that

this model carries no print, as makers, although they demand it paper-covered, seem to prefer to attach their own labels to it.

The following dimensional data should be carefully noted, as they differ appreciably from those of the previous model :

Total length, 8 inches ; width, $5\frac{1}{8}$ inches ; depth, 3 inches ; total weight uncharged, taking the two portions together, just under $4\frac{1}{2}$ ounces.

Finally, I would point out that the paper covering used in the case of the trough is generally white, while grey is a popular colour for the cover portion. The margins on the inner side alike of the cover and the trough are shown by the shaded portions on the sides and ends.

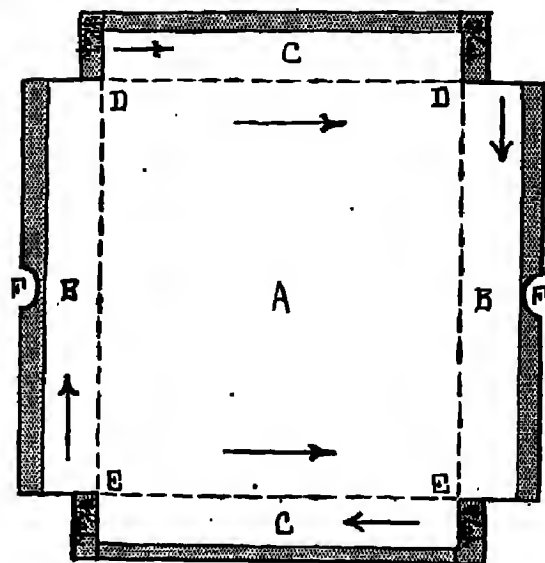
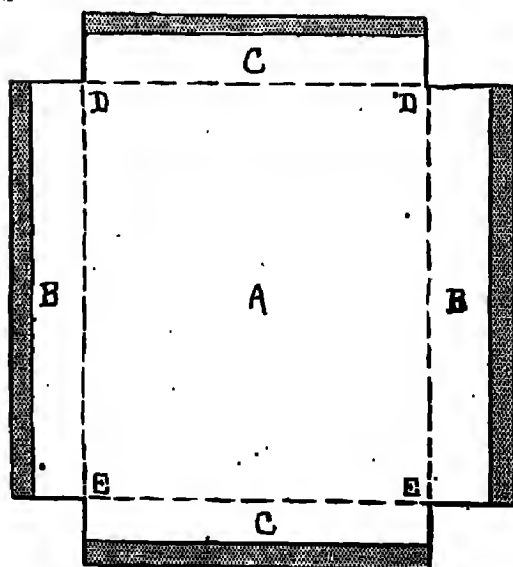
Fig. 42 shows another example of a two-piece box which is becoming very popular in the hosiery trade for the sale of ladies' stockings. The present example takes a quarter dozen, while other somewhat similar models are required to take half-dozen and dozen lots.

The lid or cover of the box is shown in the upper drawing, A being its top, B, B its sides, and C, C its ends. The trough is constructed in a similar way, but is a shade smaller. In order that this very shallow box may open easily thumb-holes F, F are provided, as shown in the lid sides, B, B.

The mode of joining the corners is broadly the same as that already described when dealing with the babies' bottle box (Fig. 40). In this instance, although the corner flaps, which are indicated in the case of the lid, are only short, they must be very stout, and some firms will probably prefer, therefore, to make them of thin card rather than of thick paper. The glue or other adhesive must be of good quality, as this class of hosiery is now being sent to many different parts of the world.

Right-angled bends are arranged for, as will be expected, both in the case of the lid and the trough, along the lines DD, DE, EE, and ED, while the cover is printed on A, B, B, and C, C, in the direction of the arrows. The trough portion carries no print as a rule.

The entire outer surface of the cover or lid is finished in tasteful grey paper, while the outer surface of the trough

*Lid of Box.**Rough Portion.*FIG. 42.—ANOTHER EXAMPLE OF POPULAR TWO-PIECE
HOSIERY BOX.

is similarly concealed with cheaper creamy-white paper. The inner margins of these paper coverings are indicated in both instances by the shaded portions of the sides and ends.

The following are the dimensional data relating to this hosiery trade box :—

Length, $9\frac{1}{4}$ inches ; width, $6\frac{3}{4}$ inches ; depth, $1\frac{5}{8}$ inches ; total weight uncharged, taking the lid and trough together, $4\frac{1}{2}$ ounces.

CHAPTER IX

MORE and more attention is now being paid to the packing of foodstuffs in cardboard instead of in the much more expensive wooden boxes and tinplate containers. It seems, therefore, desirable to illustrate a model in the present chapter, or if box and packet makers consider chocolates are a form of food to illustrate three such examples, the manufacture of which may be recommended with every confidence. Special care has been taken in selecting examples to keep them as simple as possible, since complicated models are obviously far more difficult to produce at competitive prices.

TWO SINGLE-PIECE PACKETS

Fig. 43 illustrates a model of an entirely different type to any that we have had up to now. In this example A represents a front of the packet or carton, and B is its back. The two sides are indicated at C, C, while the attachment flap is shown at D, this being covered with adhesive and attached to the back of C so that its inner margin TP corresponds with the outer margin of C shown at NQ. The front of the packet is extended in an upward direction by an inner top G, while the back of this packet is extended in a similar direction by an outer top F. The two sides C, C are again extended upwards by inner top flaps E, E, while they are extended in the other direction by two inner base flaps K, K. The front is also extended in a downward direction by an inner flap M, forming a part of the base, but the outer base itself is indicated at L, the shaded portions of which indicate the glued margins.

With regard to bends, some are full right angles and some are slightly more. The right-angled ones are indicated by the lines N₁Q, OR, OR, and PT, while those that are more than right angles are shown at QQ, QR, RR, and RT.

As regards the various bends in the top portion, namely, N_1N , N_1O , OO , and OP , these are usually described as being full right angles, but if they are accurately measured they will be found to be slightly less than ninety degrees. Slits for the attachment of coloured ribbon are made in four places in this model, as shown as SS, SS, SS, and SS. Printing is demanded on the entire outer side only as regards A, B, C, C, but boxmakers should carefully note that it is in two directions, namely, as indicated by the two couples of arrows. A priced paper sealer is attached to F, as shown

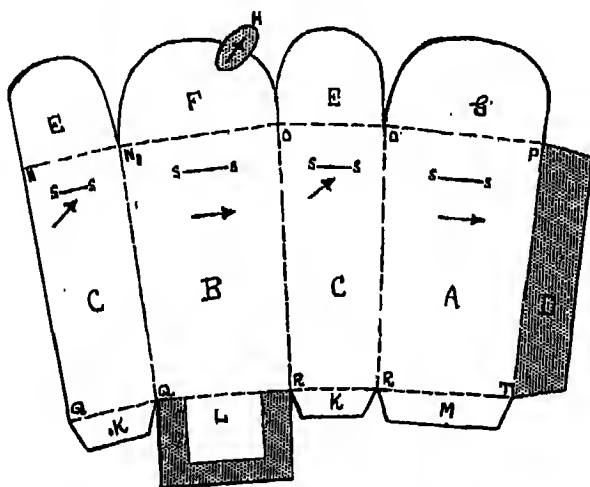


FIG. 43.—SINGLE-PIECE MIXED CHOCOLATES MODEL.

at H, its exposed portion after charging being affixed to G. After insertion of ribbon in the major slits SS of B, and SS of A, this is usually fixed to the card by means of an adhesive paper slip not shown in the drawing.

The following dimensional data relate to this very useful model :—

Total height measured along PT, $3\frac{3}{4}$ inches ; width of back and front measured along OP, $2\frac{1}{4}$ inches ; width of back and front measured along RT, $1\frac{3}{4}$ inches ; width of sides, $1\frac{1}{2}$ inches, along top and $1\frac{1}{4}$ inches along base ; total weight, uncharged, $\frac{1}{4}$ of an ounce.

Fig. 44 shows a very desirable single-piece packet in which a special biscuit food is supplied in dozens.

In this example A represents the front, and B is the back, C, C again being the two sides, while D is the attachment flap which is heavily covered with adhesive and then attached to the back of C in the manner already described in several previous examples. The sides C, C are each extended in both directions by top and base flaps E, E and G, G, the back B is also extended in both directions by larger lid and base flaps F, F, while the front is likewise similarly extended by rectangular flaps H, H. Paper sealing flaps are attached to the outer margin of F as shown

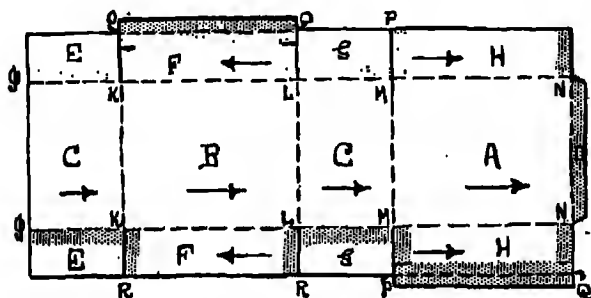


FIG. 44.—SINGLE-PIECE PACKET IN WHICH A WHEATEN BISCUIT FOOD IS SOLD.

in the upper left-hand portion of the drawing, while a similar flap is attached to H, as shown in the lower right-hand portion of the figure. The shorter shaded portions on E, E, F, F, G, G, and H, H indicate the positions on which glue or other adhesive is required.

Right-angled bends must be arranged for along the lines IKLMN, NMLKI, KK, LL, MM, and NN, also in the case of the paper sealers along the lines OO and PQ. Slits are essential to secure independent operation along the lines OK, OL, PM, PM, RL, and RK. Printing is demanded on all those portions bearing arrows, the direction of the printing being that indicated, but the inner surface carries no print of any kind. Paper covering is not as a rule demanded either on the outer or inner side, but as an offset

against this, box and packet makers may be required to print in half-a-dozen shades or colours on the same example.

Dimensional data are as under :—

Total length measured along MN, $7\frac{1}{2}$ inches ; width of side, measured along LM, 4 inches ; depth of packet, measured along LL, $5\frac{1}{4}$ inches ; total weight, uncharged, 2 ounces exactly.

A FOUR-PIECE BOX FOR ENVELOPE PACKING

Fig. 45 depicts a very convenient and much-used envelope packing box designed to hold 250 commercial envelopes for use in hotels, boarding houses, etc. The upper sketch depicts the lid, of which A is the lid top, C, C are the sides, and B, B the lid ends. Right-angled bends are arranged for along the lines DD, DE, EE and ED. Small corner flaps occupying the whole length of the lid sides consist of heavily gummed paper and are shown shaded.

The trough portion is sketched out below the lid, and A is the trough base, B, B, being the trough sides, and the shaded portions on these are the corner flaps which consist of heavily glued paper for the attachment of the sides to the ends which are shown below. Each end it will be noticed has a shaded portion, which consists of stout heavily gummed paper, and a right-angled bend is made in this along the end edge shown at CD, CD. The exposed portion of the paper is then attached along the lines CD, CD of the trough base.

Dimensional data are now given :—

Length of box, 10 inches ; width of end, 6 inches ; depth of box, $3\frac{1}{2}$ inches ; total weight, uncharged, taking all the four pieces into account, 4 ounces exactly. This model may be made in two pieces instead of in four if preferred.

THREE TWO-PIECE BOXES

Although the craze for fitting together wooden piece picture puzzles has now rather died down, there is still a very large demand for boxes to hold them, and box-makers would, therefore, do well to include one or more examples

in their programme. Fig. 46 shows one of the simplest and most convenient models, which takes 110 pieces of average size. It may be made in four pieces if preferred.

The upper sketch depicts the lid, and A is the lid top,

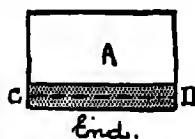
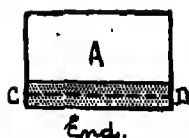
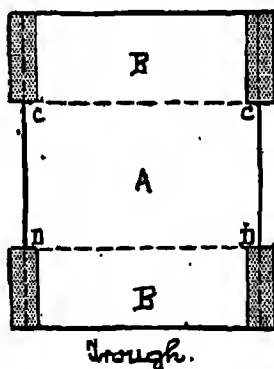
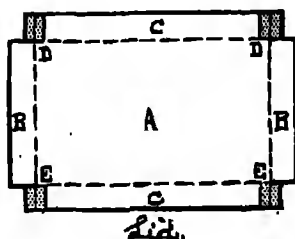


FIG. 45.—USEFUL FOUR-PIECE MODEL FOR SALE TO COMMERCIAL ENVELOPE CONTRACTORS.

B, B being the lid sides, and C, C the lid ends. Right-angled bends are arranged for along the lines DD, DE, EE, and ED. The shaded portions indicate the margins of the paper

covering on the inner side or surface. The corners are joined by the usual stout adhesive paper flaps.

The trough portion is sketched out below, and A as will

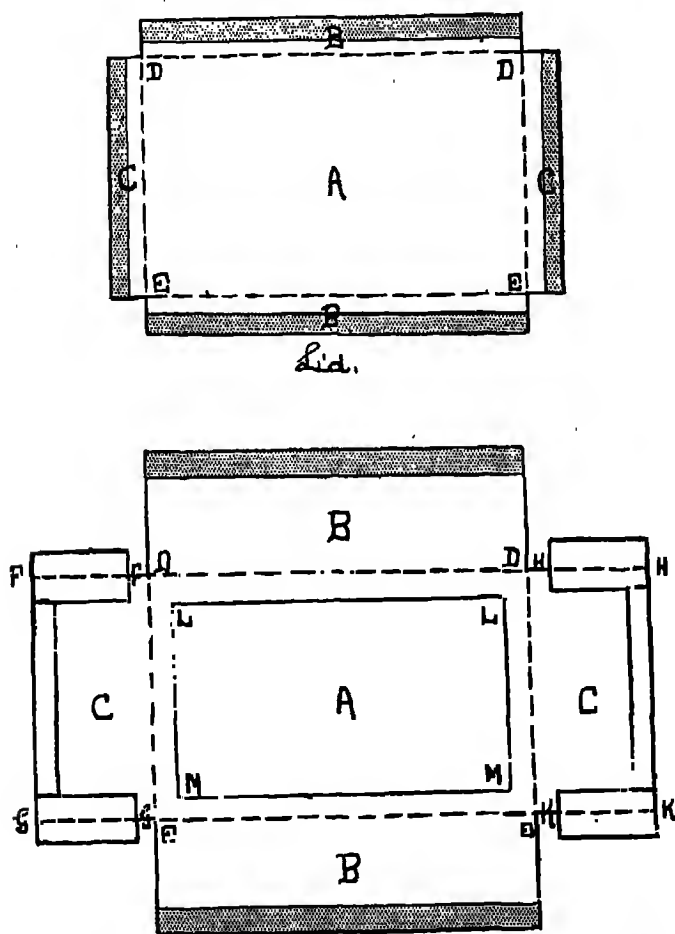


FIG. 46.—POPULAR TWO-PIECE WOODEN PIECE PUZZLE BOX.

be gathered represents the trough base, B, B the sides, and C, C the ends respectively. Right-angled bends are arranged for along the lines DD, DE, EE, and ED as before, and also along the lines FF, GG, HH, and KK.

Two points should be specially noted with regard to this box. First of all, that the paper corner flaps shown by the shaded portions do not extend the entire length of the trough ends, and that thus a little material is saved on each. Secondly, that the trough portion is not paper-covered on its entire outer surface, the margin of this being shown by the lines LL, LM, MM, and ML. The inner margins of the paper covering are shown by the shaded portions above B and below B in the case of the trough sides, and to the right of C, and to the left of C in the case of its ends. No printing of any kind is as a rule demanded when this model is ordered.

The dimensional details relating thereto are as under :—

Total length, 8 inches ; total width, 5 inches ; total depth, $2\frac{1}{2}$ inches ; total weight, uncharged, taking the lid and trough together, $2\frac{7}{8}$ ounces.

Fig. 47 shows a two-piece model which is best described as being a single pound chocolate box. Experts have claimed that this shape is not convenient, but the very large sale that it enjoys would indicate that the public are pleased with it.

The cover portion is sketched out in the upper diagram, and A represents the cover top, B, B, its sides, and C, C its ends. In the trough portion A represents the base; while the other four portions, B, B, C, C are similar. Right-angled bends in both cases are arranged for along the lines DD, DE, EE, and ED.

With regard to the cover, here again material is saved by the corner flaps of adhesive paper not extending the full length of the sides B, B. Right-angled bends are naturally made, but these are not lettered in this case.

Both portions are supplied paper-covered on their entire outer surfaces, the inner margins being shown by the shaded portions. Creamy-white paper is used for the trough as a rule, but buff paper carrying print in the direction of the arrow is employed for the cover.

The dimensional details are as under :—

Total length, $6\frac{3}{4}$ inches ; width, 5 inches ; depth, $1\frac{1}{2}$ inches ; total weight uncharged, taking both portions together, 3 ounces exactly.

Fig. 48 illustrates a popular two-piece box in which powders are sold by pharmacists. As will be gathered in the

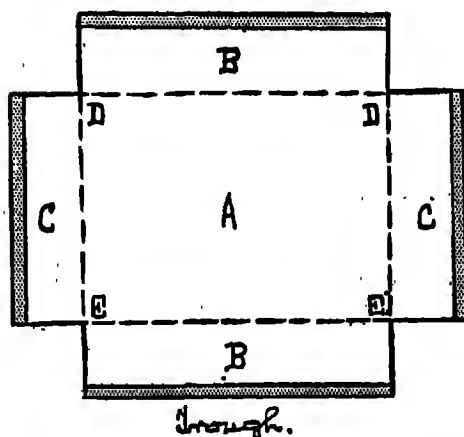
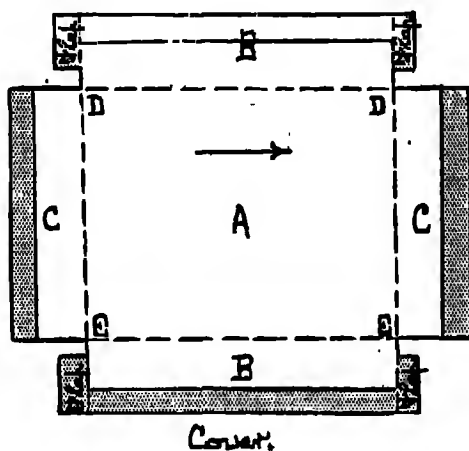


FIG. 47.—FLAT MODEL FOR PACKING SINGLE POUNDS OF MIXED CHOCOLATES.

case of the cover A is the top, B, B are the sides, and C, C are the ends. Thumb-holes are made at D, D in order that

the box may easily open for the removal of a single powder. With regard to the trough, A is the base, B, B are the sides, and C, C are the ends. Right-angled bends are arranged for in the case of the cover along the lines EF, FG, GH, and HE,

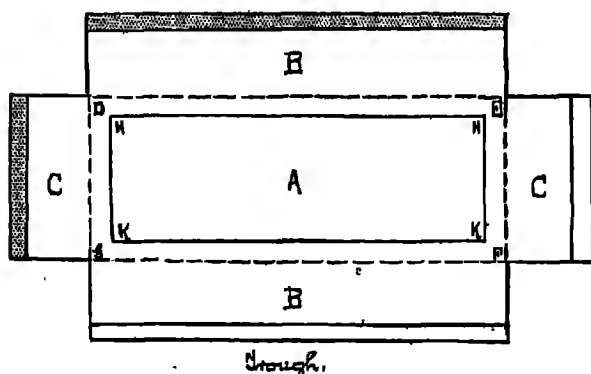
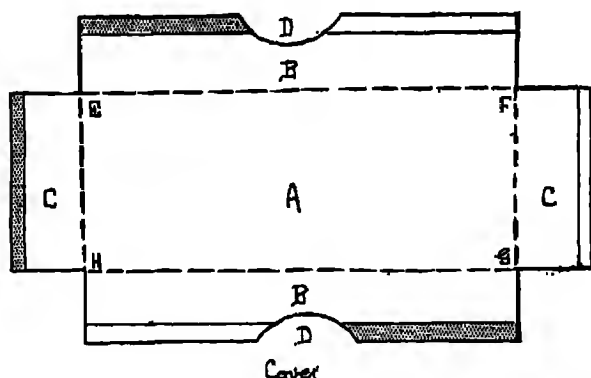


FIG. 48.—A POPULAR TWO-PIECE POWDER BOX, HOLDING ABOUT SIX PAPERED PHARMACEUTICAL POWDERS.

while in the case of the trough they are made along the lines DE, EF, FG, and GD.

This model should be supplied paper-covered but in a wholly unprinted state. The inner margins of the paper coverings are shown by the shaded portions, only one of each of which is indicated in the present instance. In the

case of the trough the outer paper covering does not cover the base, the inner rectangle HH, HK, KK, KH, being exposed card.

The dimensional details of this small but exceptionally useful model are as under :—

Length, 3 inches ; width, $1\frac{1}{2}$ inches ; depth, $\frac{5}{8}$ of an inch ; total weight, uncharged, taking both pieces together, just $\frac{1}{4}$ of an ounce.

CHAPTER X

IN previous chapters examples of boxes and packets widely differing in the number of pieces have been taken up for consideration. In the present instance it seems advisable to devote a whole chapter to those boxes and packets which can be made in one piece. In numerous instances the cost of these is not excessive, and it seems absurd, therefore, to waste more material than necessary by making a box in two or more pieces when a single-piece model will serve.

Particular attention of box and packet makers is drawn to the use of single-piece models in the photographic industry. One such model is illustrated in the present chapter, while a previous example was discussed and illustrated in a previous chapter. Two-piece models of the trough and cover type are all too common in this industry, and the use of such expensive packings naturally tends to keep the price of the film packs, etc., up, and this in turn is apt to limit their sales.

SOME SMALLER SINGLE-PIECE PACKETS

Fig. 49 illustrates a small single-piece packet in which hairpins are sold. In this example A is the top and B is the base, while C, C are the front and back (or if we prefer calling them so, the sides respectively), and D is the attachment flap, which, after being covered with adhesive, is attached to the back of the lower strip C, so that its inner margin MM corresponds with the outer margin QQ. The top is extended to the left by an end E, and an end flap F, while the base is similarly extended, though in the opposite direction, by an end G and an end flap H. The sides are extended in both directions by small, almost square, subsidiary flaps, K, K, and L, L, one corner of each of which is carefully rounded as depicted. Cuts are made to free these along the lines TO, TP and NU,

Right-angled bends are made along the lines MM, NN, OO, PP, NOPQ, ONM, SS, RR, and PQ. This model is only printed outside, and in one portion only, namely, on the top A, the direction of the print being that depicted by the arrow. In addition to this the model is paper-covered on its entire outer surface.

The following dimensional data relate to this hairpin packet :—

Length measured along OO, $3\frac{1}{4}$ ins. ; width measured

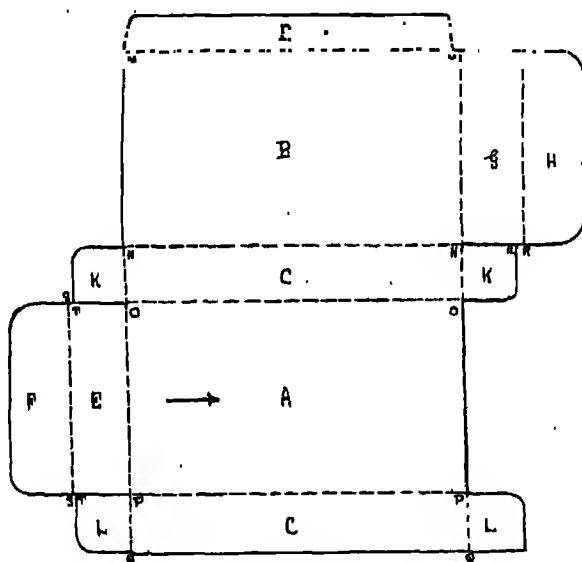


FIG. 49.—SINGLE-PIECE HAIRPIN PACKET.

along OP, $1\frac{7}{8}$ ins. ; depth measured along OT, $\frac{5}{8}$ in. ; total weight uncharged, under $\frac{1}{4}$ oz.

Chocolate cigarettes are coming into favour, and in some towns already a very large sale is reported. Fig. 50 depicts a small single-piece packet in which six such chocolate cigarettes are sold at a popular price, while, of course, there are larger models holding two or three times this number of the sweetmeats. In the present example A is the front and B is the back, while, C, C are the two sides, and D is the attachment flap, which, as in the previous example, is

heavily covered with adhesive and attached to the back of the left hand C, so that its inner margin NN corresponds to the extreme outer edge of the side C, which I have not lettered. The front is extended in a downward direction by a base G, and a base flap H, while the back is extended in an upward direction by a top E, and a top flap F. Right-angled bends are arranged for along the lines KK, LL, MM, NN, KL, PP, OO, and MN. This model may be demanded

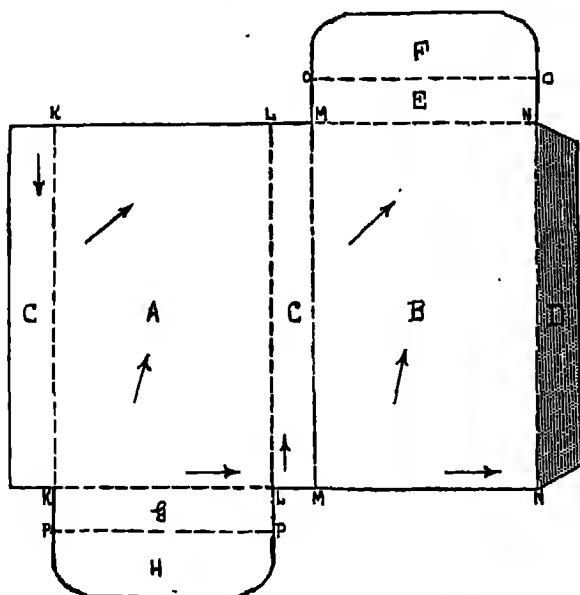


FIG. 50.—SINGLE-PIECE PACKET FOR CHOCOLATE CIGARETTES.

paper-covered on the whole of the outer surface, or printing direct on the card again on its entire, or almost entire, outer surface may be specified. Printing in several colours is nearly always insisted upon, while a characteristic feature of this model is found in the several directions in which the printing is executed. In the example before me, printing has been demanded on A, B and C, C. While on each of the sides C, C, type is only set in a single direction, on the front and back A and B the print is, as will be evident, set in no

less than three different directions. In other models which have come to my notice the portions G, H, E, and F also carry a word or two of print on their outer surfaces.

The following dimensional data relate to this very interesting model :—

Height measured along LL, $2\frac{7}{8}$ ins.; width of front measured along KL, $1\frac{3}{4}$ ins.; width of base measured along LP, $\frac{3}{4}$ in.; total weight uncharged, under $\frac{1}{2}$ oz.

FOR STATIONERS AND SWEETMEAT MERCHANTS

Fig. 51 illustrates an exceptionally useful single-piece example of a small box in which stationers' metallic paper

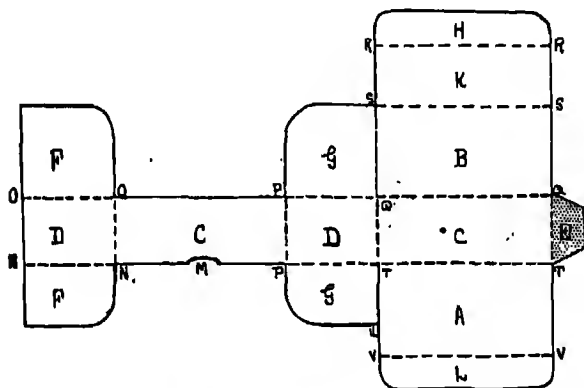


FIG. 51.—USEFUL EXAMPLE OF STATIONERS' PAPER CLIP BOX.

clips are sold to the public. In this drawing A represents the top of the box, while B is the bottom. The front is made up of two pieces K and C, in this instance the C with the thumb-hole M, while the back is made up of a single piece C, which is extended by an attachment flap E, this last requiring to be heavily gummed prior to being affixed to the back of the left-hand end D, so that its inner margin QT corresponds with the outer margin ON. The right-hand D is another end, which, like the left-hand end, is extended in an upward and downward direction by subsidiary flaps, which, it should be carefully noted, are not of the same size,

these flaps being indicated by the letters F, F, and G, G. While the upper F corresponds with the upper G in size, the point I wish to make is that the upper F is much larger than the lower F, while the upper G is again much larger than the lower G. The top A is extended in a downward direction by a top flap L, while K is extended in an upward direction as indicated by an inner front flap H. To free G, G from the rest of the model, *i.e.*, in order to secure their independent operation, slits are made along the lines SQ and TU.

Numerous right-handed bends of very varying length are required in order satisfactorily to fit this model together. Thus short bends are made along the lines OO, NN, and right-hand ON, as well as along PP, QT, TQ. Other rather longer

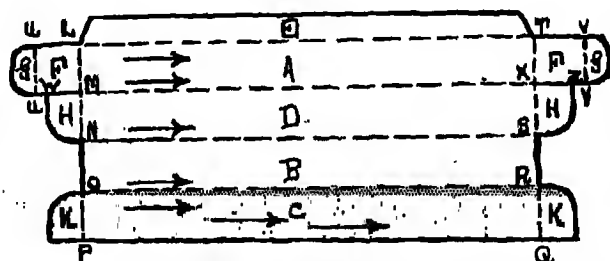


FIG. 52.—SINGLE-PIECE PACKET IN WHICH STICKS OF PEPPERMINT ROCK ARE SOLD.

right-angled bends are made along the lines RR, SS, QQ, TT, and VV, while a couple of still longer bends which are again right angles are made along the lines PQQ and PTT. In fitting this model together the larger and uppermost subsidiary flaps F and G rest on the base B, slightly overlapping each other, while K is turned in behind the left-hand portion C, which, as above stated, forms the outer front. The smaller and lower flaps F and G then rest on H, but are not large enough to overlap each other. Finally, the flap L fits in between K and C, leaving the thumb-hole M on the last-mentioned portion exposed, so that the box may be opened easily and quickly.

The following dimensional data relate to this model, which, by the way, carries no print of any kind on any

portion, as the makers usually attach to it one of their own labels:—

Total length measured along QQ, $2\frac{1}{2}$ in.; total width measured along PQ, $1\frac{1}{2}$ in.; total depth measured along QT, 1 in.; weight uncharged, just under $\frac{1}{4}$ oz.

Peppermint rock is enjoying a larger sale than ever, and Fig. 52 illustrates a single-piece model in which small sticks of this are sold. In the present example A is the top and B is the base, D and C being the front and back respectively, and E is the attachment flap which is heavily gummed, or otherwise covered with adhesive, and then attached to the back of C, so that its inner margin LT corresponds with PQ. The top is extended in both directions by ends F, F, and end flaps G, G; the front and back are similarly extended in both directions by smaller subsidiary flaps H, H and K, K. To secure the independent operation of F, F, cuts must be made along the lines WM and XZ. Right-angled bends are then arranged for along the lines LT, MX, NS, OR, shorter ones being made along the lines LMN, SXT, OP, RQ, UU, and VV. The model is paper-covered on its entire outer surface only, and printed on the outer surfaces of A, B, C, D. In the case of B and D, only one line is demanded, the direction being that of the arrows. On A, however, two lines are ordered, while on C three lines are usually expected.

The following are dimensional details of this much-used model:—

Length, $9\frac{1}{2}$ ins.; depth, 1 in.; width of top, 1 in., *i.e.*, the end is square; total weight uncharged, $\frac{1}{4}$ oz.

MODELS FOR PHOTOGRAPHERS AND PHARMACISTS

Fig. 53 shows a very important and much-used single-piece model for the sale of photographic film packs. In this example, considering it as an upright packet, A represents the front and B the back. C, C are the two sides, and D is the attachment flap, which, after being heavily covered with adhesive, is attached to the left-hand C, so that its inner margin RR corresponds with OW. The front is extended in an upward and downward direction, by a base G and a top G, also with a compound base flap E and a com-

pound top flap E. In this last is cut out round the lines MEN and VEX respectively a slit so that the two portions F, F may operate independently. The sides C, C are extended in both directions by comparatively small subsidiary flaps H, H and K, K, and in order that these may operate in their turn independently, cuts must be made along the lines MP, UV, XT and PN. Right-angled bends are then arranged for

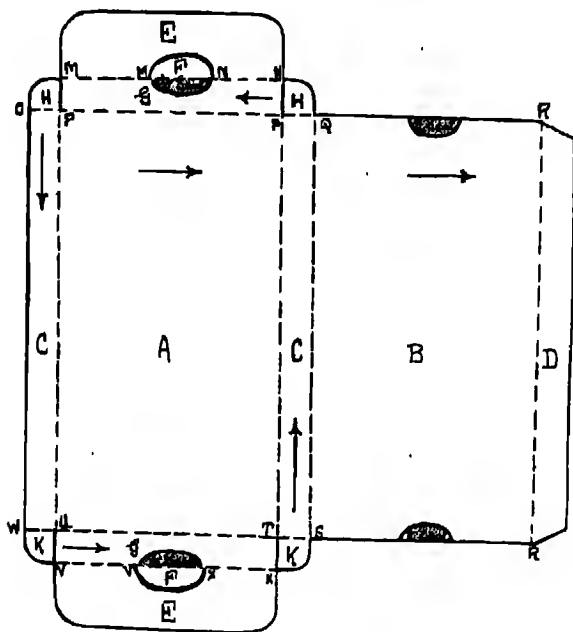


FIG. 53.—SINGLE-PIECE MODEL FOR PHOTOGRAPHIC FILM PACKS.

along the lines MM, MN, NN, PP, UT, VV, VX, XX, OP, WU, TS, QP, while much longer but otherwise similar bends are made along the lines PU, TP, QS and RR. Printing is demanded on A, B, C, C, G, G, the direction of the print being that of the arrows in every instance. The packet is closed by a couple of paper seals, half of each of which are shown on the model in their respective places.

The following dimensional details relate to this model :—
Height measured along TP, $6\frac{1}{2}$ ins.; width of front,

$3\frac{1}{2}$ ins. ; width of base measured along UV, $\frac{5}{8}$ in. ; total weight uncharged, just under $\frac{3}{4}$ oz.

This model may be demanded paper covered on its entire outer surface or printing may be ordered actually on the cardboard itself.

Fig. 54, the last in the present chapter, depicts a useful single-piece model in which glass pots of malt extract are

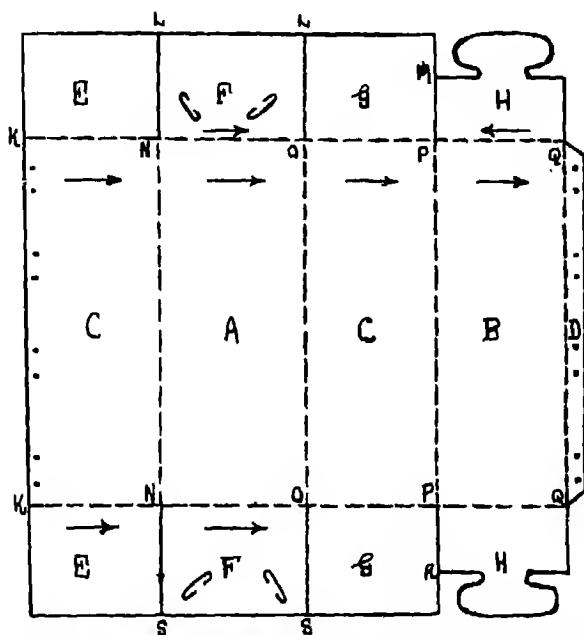


FIG. 54.—SINGLE-PIECE MODEL FOR PACKING POTS OF MALT EXTRACT.

sold. In this example again A is the front and B is the back, C, C being the sides, and D is the attachment flap, which instead of being glued is wire-stitched at the four points indicated to the back of the left-hand C, so that its inner margin QQ corresponds to KK. The portions C, A, C, are extended in both directions by rectangular tops and bases, insertion slits for closing being cut of the shape and size indicated on F, F. The back B is extended in both directions, first by a rectangular top and base, and this in

its turn is cut out, after being further extended to form top and base flaps, the whole being shown at H, H respectively. To secure the independent operation of the various parts, slits must be made along the lines LN, LO, MP, NS, OS, and PR. Right-angled bends are then made along the lines KNOPO, QPONK, and also along the shorter lines NN, OO, PP, and QQ. As this is a wire-stitched model, no adhesive of any kind is used in its manufacture. Printing is generally demanded mainly on the portions A, B, C, C in the direction of the four arrows. Frequently, however, additional print is insisted upon on F, F, the upper H and the lower E, the direction again being that of the arrows. No print of any kind is carried on the inner surface, while the model is generally printed on the cardboard, *i.e.*, it is not supplied paper-covered.

The following are the dimensions :—

Total height, 7 ins. ; width of front, $2\frac{7}{8}$ ins. ; width of side $2\frac{1}{2}$ ins., *i.e.*, the top is rectangular and not quite square ; total weight uncharged after removal of the wire stitching, $1\frac{1}{4}$ oz.

CHAPTER XI

IN the previous ten chapters attention has mainly been directed to those boxes and packets of medium or small size, while in certain instances again we have solely or almost solely confined our examination to those consisting of single pieces. In the present instance it seems advisable to depart from both these customs and to take a couple of large models for special notice, as well as some very small ones ; and still further, instead of limiting our space to those models which can conveniently be made in one piece, a couple will be described which are most conveniently produced in as many as four pieces.

While the manufacture of large-sized examples is often costly, it must be remembered that the actual dimensions given need not apply to every use for which the box is prepared. Smaller sizes made on exactly the same lines can be used by other types of traders, and to produce these minor adjustments only are, as a rule, called for. Then again boxmakers will object that increasing the number of pieces adds substantially to the cost. This does not always follow by any means, and in the case of one of my models production in four pieces greatly increases its strength, and if it were not made in this manner it would not be strong enough for the purpose in question. The reason for this will be evident after a careful examination of Fig. 59 has been made.

SINGLE-PIECE CONFECTIONERS' CAKE CONTAINER

Fig. 55 depicts a very popular single-piece confectioners' box which is widely employed for the packing of sweet cakes of different types. In this example A represents the top and B is the bottom, F being the back and E the front, while C and D are the two trough sides, H and K being the

two lid sides, and G the lid front or flap. The trough front E is extended to the right and to the left by curiously shaped flaps indicated at L, 2L, while the back F is similarly

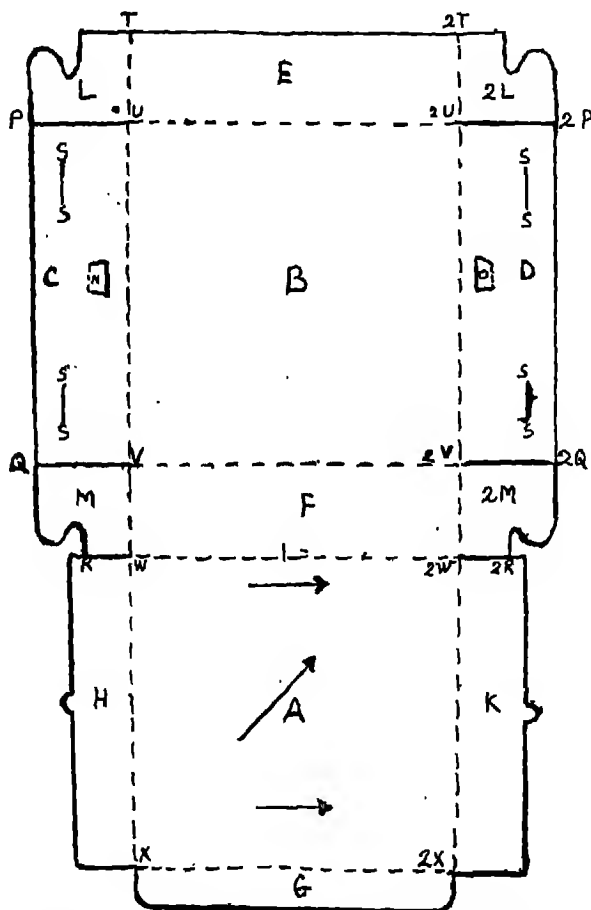


FIG. 55.—POPULAR SINGLE-PIECE CONFECTIONERS' BOX FOR CAKE PACKING.

extended by other flaps M and 2M, the noses of which are directed towards the lid instead of away from the lid, as are those of the two previous flaps. The lid sides have each a small projection not lettered in the drawing, while the

base sides are slitted as shown at SS, SS, SS, SS, and also slitted round the portions N and O. To secure independent operation of the various parts cuts or slits are made along the lines PU, QV, RW, 2W2R, 2V2Q, and 2U2P. Right-angled bends are then arranged for along the lines TUVWX, 2X2W2V2U2T, and also along the shorter lines U2U, V2V, W2W, and X2X. The noses on L and M fit into the slits SS, SS, on C, while the corresponding noses of 2L, 2M fit into the corresponding slits on D. The projections on H and K then fit into N and O respectively.

No adhesive of any kind is required in the production of this cake box, and printing, as a rule, is on the outer portion of the lid top only in the direction of the three arrows thereon.

The following are dimensional data: Total length, 8 ins.; total breadth, 8 ins., *i.e.*, this box is square; total depth, $2\frac{3}{8}$ ins.; total weight uncharged, $1\frac{1}{2}$ ozs. This model is not, as a rule, supplied paper-covered.

THREE INTERESTING TWO-PIECE EXAMPLES

Fig. 56 depicts the first of a triad of small double-piece models. In this example a two-piece packet is used for the sale of five-grain pharmacy tablets, the trough holding 16 of the size roughly indicated in the square E. As will be gathered from this drawing, A is the base of the trough, D and D are its sides, C and C are its ends, and B and B are its end flaps. Right-angled bends are arranged for along the lines GH, FK, KF, HG, as well as along the lines FF and KK. Taking the cover portion, this is of a simple character, A being its top and B its base, C, C, its front and back, while D is the attachment flap, which is well covered with adhesive, and then attached to the back of the back strip C so that its outer margin FF corresponds with the inner margin of C shown at LL. Right-angled bends are then arranged for along the lines GG, HH, KK, and LL. Printing is demanded on the cover only, and on the outer side of this only, or rather its outer surface, the print being in the two directions depicted by the four arrows.

The following are dimensional data relating to this

example.: Length, $1\frac{3}{4}$ ins.; breadth, $1\frac{3}{4}$ ins., *i.e.*, we are again working with a square; depth, $\frac{1}{4}$ in.; total weight unchanged, well under $\frac{1}{4}$ oz., taking both portions together.

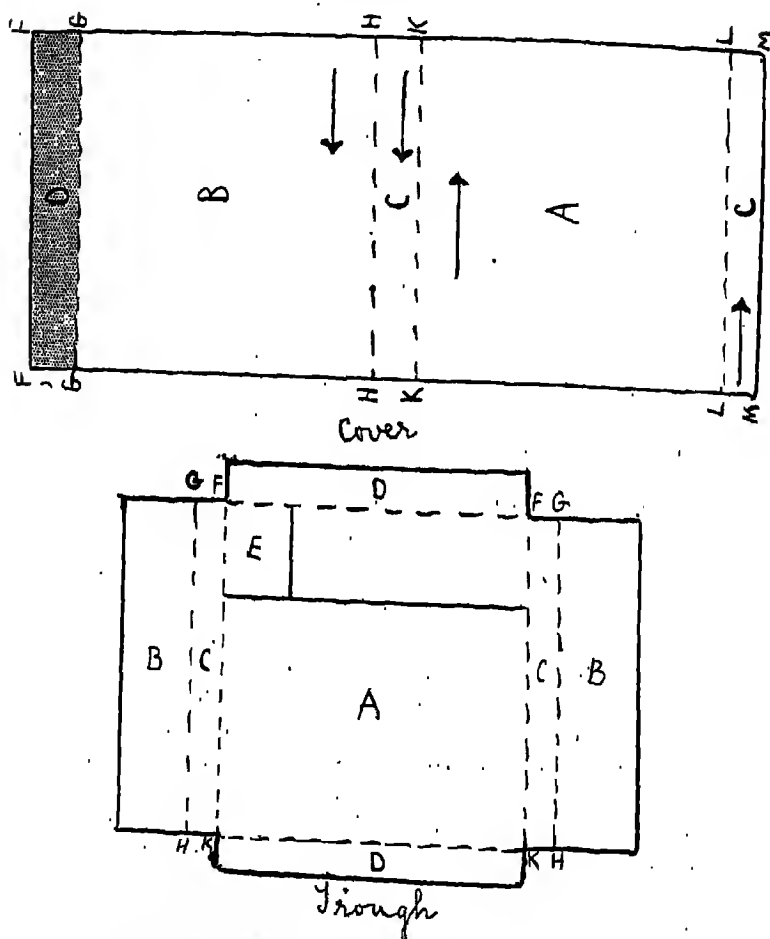


FIG. 56.—SMALL TWO-PIECE PACKET FOR SALE OF PHARMACISTS' FIVE-GRAIN TABLETS.

Fig. 57 depicts the cover only of another two-piece example, in this case one in which automatic pencils are sold. The trough is exactly similar, except, of course, that it is a shade smaller.

In this example A is the top of the cover, B, B, are its sides and C, C, are its ends. Right-angled bends are arranged for along the lines GK, KK, KG, and GG, while it should be noted specially that the corners are joined merely by the stout paper covering which conceals the entire outer surface of both pieces.

As regards the paper margin on the inner surface of both pieces of this example, its depth is shown by the lines DD, EE, FF, and HH. Printing is demanded, as a rule, only on the lid top, the direction being that of the arrow. No print on any inner surface of either piece is necessary.

With regard to dimensional details, these are as follows : Total length, $5\frac{3}{4}$ ins. ; total width, $\frac{5}{8}$ in. ; total depth, $\frac{1}{2}$ in. ; weight uncharged, taking the two pieces together,

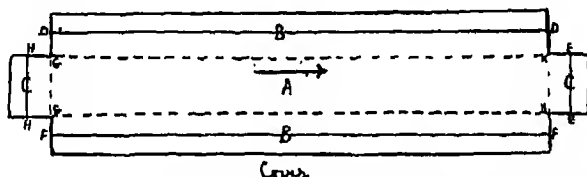


FIG. 57.—TWO-PIECE EXAMPLE IN WHICH AUTOMATIC PENCILS ARE SOLD.

just under $\frac{1}{2}$ oz. Stout greyish paper is most favoured for the covering.

Fig. 58 illustrates a two-piece model in which hairpins are sold at a low price in bazaars. Taking the cover first, this is of a simple type, and consists of a rectangle of stout board of which A is the top, and B is the bottom, D is the front, and C is the back. There is no attachment flap in this case, as the stout paper covering throughout secures the strip C to B, the line FH then corresponding with the line EG. Right-angled bends are arranged for along the lines KK, LL and MM. As to the inner paper covering, the margin of this is shown at the left-hand side of the drawing by the line EF, and at the right-hand side of the diagram by the line GH.

Taking the trough, A is its base, B, B, are its sides, and C, C, are its ends. This model has no corner flaps, the ends

being connected with the sides merely by means of the paper covering. In this case the paper does not completely conceal the outer surface, the space within the rectangle LMNO being bare cardboard. As regards the inner paper covering margin, this almost occupies the full depth of the sides and ends, as will be evident by examining its boundaries, which are shown by the lines EE, GG, FF and DD. Right-angled bends are arranged for, as will be expected, along the lines HH, HK, KK and KH, but this

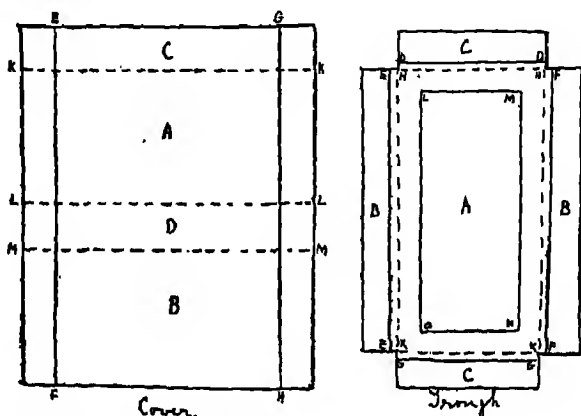


FIG. 58.—TWO-PIECE-TROUGH AND COVER—HAIR-PIN BOX.

portion is not attached by glue or other means to the cover.

The following dimensional data will be useful: Total length, $3\frac{1}{2}$ ins.; width, $1\frac{1}{2}$ ins.; depth, $\frac{1}{2}$ in.; total weight uncharged, just over $\frac{1}{4}$ oz., weighing both portions together. As hairpin manufacturers attach their own labels to the cover, boxmakers are not generally asked to supply this example in a printed state.

A PAIR OF FOUR-PIECE BOXES

It will be interesting and useful to devote the small amount of remaining space to the discussion of a couple of boxes made in no less than four pieces. Fig. 59 represents a much-used model, and with telephone extensions every-

where it is likely to be even more popular in the future than it has been in the past. Taking the cover first, which is

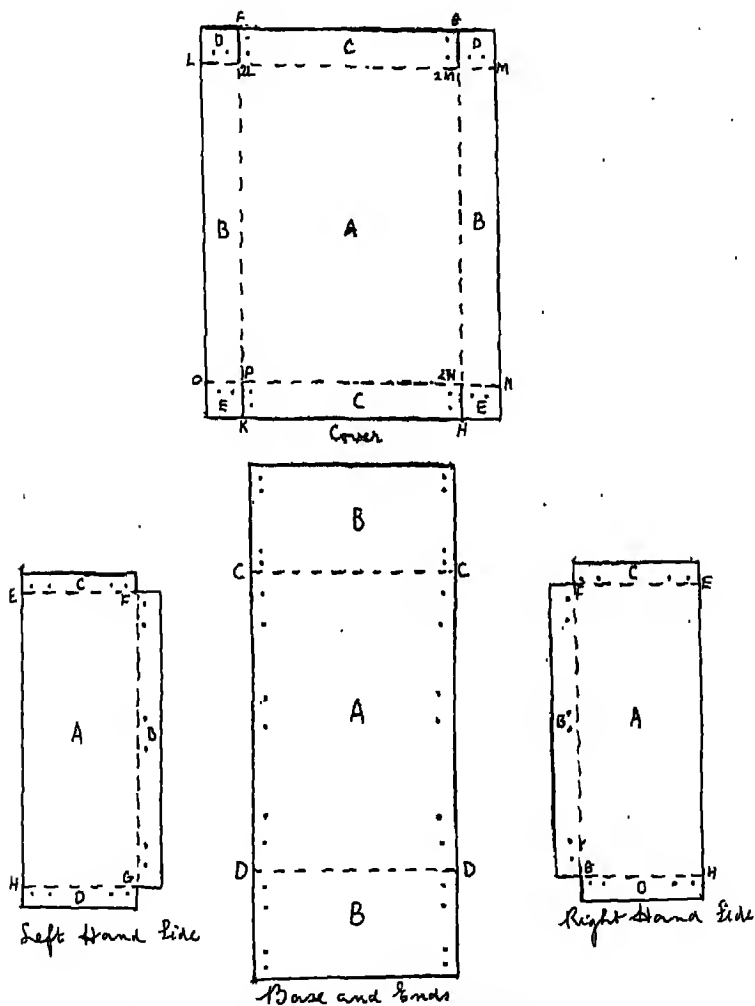


FIG. 59.—FOUR-PIECE BOX FOR TELEPHONE ROLL SET.

shown in the upper drawing, A is the lid top, B, B are its sides, and C, C are its ends. The sides are extended in an upward and downward direction in each case by two approxi-

mately square flaps, shown at D, E, D, E. To secure the independent operation of these cuts or slits must be made along the lines F₂L, KP, H₂N and G₂M. When this has been done right-angled bends are arranged for along the lines L₂L₂MM, OP₂NN, and also along the lines 2LP, 2M₂N. D and D are wire-stitched on to the upper C as shown by the dots on each, while E and E are wire-stitched on to the lower C in a similar manner.

With regard to the other portions of this model, the base and ends are shown in the centre sketch, A being the actual base, and B, B the actual ends. Right-angled bends are arranged for, as will be expected, along the lines CC and DD. In the case of the sides which are shown to the right and to the left of the base, A is the main side in both, and B is a side flap in each, while C and D in both cases are subsidiary side flaps hardly less important than the others. Right-angled bends are arranged for in both cases along the lines EF, FG and HG. In putting the trough together in the case of the right-hand side, B is wire-stitched on to A so that the line FG corresponds with the line DC. With the left-hand side, B is similarly wire-stitched to A so that the line FG corresponds with the line DC. The side flaps C, C are then wire-stitched to the actual ends B, B, so that B in each case corresponds with C, while the side flaps at the opposite end, namely, D, D, are similarly attached by wire stitches to the lower actual end B, so that B in each case corresponds with D.¹ No glue is used in any portion of this model, nor is any printing demanded thereon.

With regard to dimensional details, these are as below: Length, 10 ins.; width, 7 ins.; depth, 3 $\frac{1}{4}$ ins.; total weight uncharged, taking all the four portions together, exactly 5 $\frac{1}{4}$ ozs.

Fig. 60 depicts a four-piece drapers' shirt box. In this example the lid again is sketched out in the uppermost drawing, A being the lid top, B, B the lid sides, and C, C the lid ends. Right-angled bends are arranged for along the lines DD, DE, EE and ED, while the corners are joined by heavily gummed and extra stout paper flaps, the exposed portions of which are shown on C, C shaded. The whole

¹ The corners F and G then become C and D.

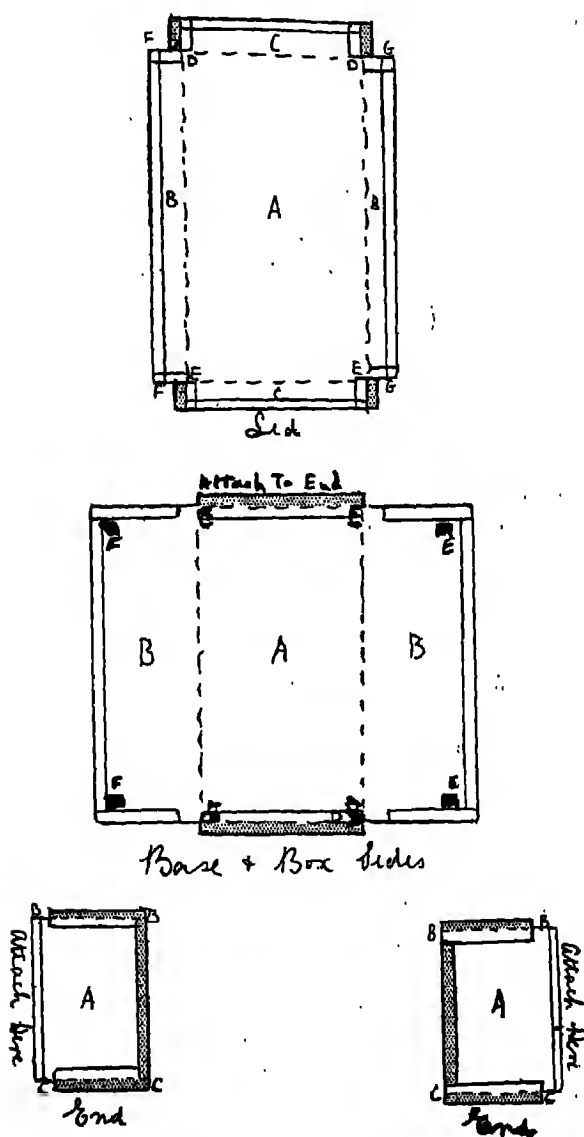


FIG. 60.—FOUR-PIECE DRAPERY BOX FOR PACKING SHIRTS.

of the outer surface of the lid is paper-covered, green paper being favoured, but as regards the inner surface the margin

of the paper from the edges is small, this being shown by the lines FF and GG in the case of B, B, while the margin is the same on the portions C and C.

The base and box sides are usually cut out in one piece, as shown in the middle drawing. In this case A is the actual base, and B, B are the two sides, right-angled bends being arranged for along the lines CC, CD, DD and DC. The shaded portions at the extremities of A are stout heavily gummed paper flaps, which after bending are attached to the ends in the direction indicated thereon. At the ends of each side B, B, strips are indicated to show the respective positions of the heavily gummed shorter flaps sketched out on the actual ends below, makers seeming to prefer this rather than to use the increasingly popular wire-stitching.

As to the ends, little need be said except that A in each case is the main end, and that at the extremity above the letter A and below it heavily gummed flaps are attached, the exposed portions of which are shown shaded. Bends on these are made in both cases along the lines BB and CC, these then being attached to the unshaded portions above and below the sides B, B, in the sketch above. When this has been done the shaded flap above CC and below DD of the base is duly concealed by the strip BC on both the ends.

With regard to paper covering, the entire outer surface of the sides and ends, but not of the base, is covered with green paper. The base itself is covered with buff paper of greater strength, while no portion of the outer or inner surface of this box carries any print, shirt makers attaching their own label. The inner margin of the paper covering is shown in the case of the true sides by the lines FF and EE on B and B. The inner margin is, as a rule, similar in depth in the case of the ends.

The following are the dimensional data relating to this model: Total length, 16 ins.; width, $8\frac{1}{2}$ ins.; depth, $5\frac{1}{2}$ ins.; total weight uncharged, taking all portions together, $14\frac{1}{4}$ ozs. This is, therefore, one of the heaviest models that we have had.

CHAPTER XII

THROUGHOUT the first eleven chapters we have purposely passed over those boxes and packets containing internal fittings. It seems desirable in the present instance to depart from this custom, as there is an enormous demand for a certain type of watchmaker's box containing a simple internal fitting. As this box can be produced by the thousand without extremely elaborate machinery, boxmakers would do well to give it special consideration.

A PAIR OF SINGLE-PIECE MODELS

First of all it seems desirable to describe and illustrate a couple of simple single-piece examples. Fig. 61 depicts a packet in which a medium-sized tube of dental cream is sold to the public. In this example A is the front and B is the back, C and D being the sides respectively, while E is the attachment flap, which, as will be gathered from the shading, is heavily covered with adhesive, and then attached to the back of D, so that its inner margin PzP corresponds with the outer margin of D depicted by TzT. Various shaped subsidiary flaps are arranged for on A, B, C and D, as shown. Thus the back is extended in an upward and downward direction by two rather small subsidiary flaps with more or less rounded corners, shown at F and L. The side C is extended also in both directions by an angular pair of flaps shown at G and M, while the front A is extended in both directions by a couple of rectangular flaps shown at H and N. In the case of the other side D it should be specially noticed that one of the subsidiary flaps, namely K, is almost square; the other, namely O, is cut considerably smaller with one corner rounded, and has its outer extremity shaved off.

In order that all these small and large flaps may operate

independently suitable slits or cuts are made. These are required along the lines R_3R , S_3S , $2R_4R$, $4S_2S$. Right-angled bends are then arranged for along the lines $2P_2Q_2R_2S_2T$, $PQRST$, and also along the lines P_2P , Q_2Q ,

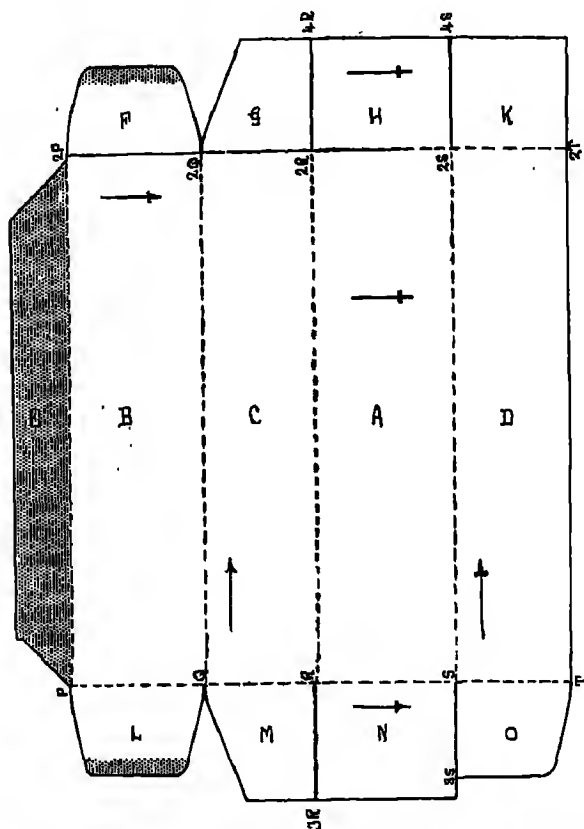


FIG. 61.—SINGLE-PIECE DENTAL CREAM TUBE PACKET. PRINT ON PORTIONS CONTAINING ARROWS IN THE DIRECTION IN WHICH THEY POINT.

R_2R , S_2S . In addition to adhesive being required on the attachment flap E a small quantity must also be added on the shaded portions of F and L.

The following dimensional data relate to this very useful and much used model :—

Total height, $4\frac{3}{4}$ inches; width of front, $1\frac{1}{4}$ inches; width of side, 1 inch; total weight uncharged, nearly $\frac{1}{4}$ ounce.

Fig. 62 shows another type of window packet quite distinct from any we have had up to now. There is a big sale for children's crayons, and there would be a bigger one than ever if window packets similar to this one were more used in selling them. In the present example, which is a flat model when at rest, A is the base, and B is the top which contains the window M, which is shown shaded.

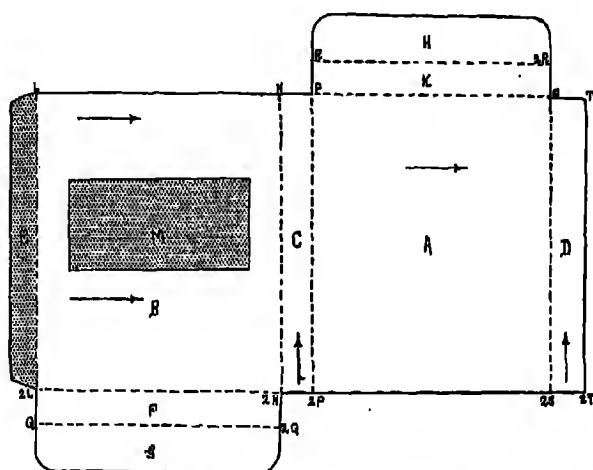


FIG. 62.—SINGLE-PIECE WINDOW PACKET FOR CHILDREN'S CRAYONS.

The two sides are shown at C and D, while E is the usual attachment flap, which is heavily covered with adhesive as indicated by its shading, and then affixed to the back of D so that its inner margin L2L corresponds with the outer margin of D shown at T2T. The upper end and the upper end flap are shown at K and H, while the lower end and the lower end flap are shown at F and G. Right-angled bends are arranged for along the lines L2L, N2N, P2P, and S2S, as well as along the somewhat shorter lines R2R, PS, 2L2N, and Q2Q. Printing is demanded on the entire outer surface only, which is often paper covered, the direction

being that of the arrows. In many instances the ends and sides carry a printed design and no lettering.

As to dimensional data these are as under :—

Total height when this packet is standing up or total length when it is at rest, $3\frac{1}{4}$ inches ; width of front, $2\frac{1}{2}$ inches ; depth of side, $\frac{3}{8}$ inch ; total weight uncharged, well under $\frac{1}{4}$ ounce owing to the fact that very light material is used in its production.

USEFUL TWO-PIECE EXAMPLES

Passing on now to two-piece examples, Fig. 63 depicts another box in which monthly calendars with small tabs

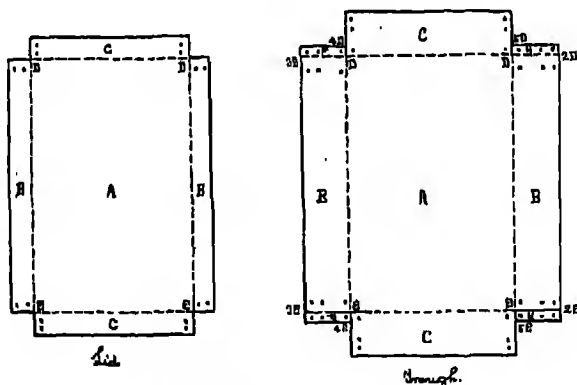


FIG. 63.—TWO-PIECE MONTHLY TAB CALENDAR CONTAINER.

attached are sold. The actual number contained in each box varies with the different makes, but in the actual example selected there were half-a-dozen.

Taking the lid first, A is the lid top and B, B are its sides, C, C being its ends. Right-angled bends are made along the lines DD, DE, EE, and ED. The corners are simply attached by a couple of wire stitches, in each case shown by the two dots on B and C. The lid itself is not attached to the trough in any way except by its own grip.

As to the base or trough portion, A is its main base and B, B are its two sides, C, C again being the ends. In this instance the sides, as distinct from the sides of the lid, are

extended in both directions by four small rectangular flaps depicted at F, G, H, and K. Right-angled bends are arranged for as will be expected along the lines 3DDD₂D, 3EEE₂E, DE and DE. In order that the flaps may operate independently, slits must be made as will be expected down 4DD, 5DD, and up 4EE and 5EE. Wire stitching in three

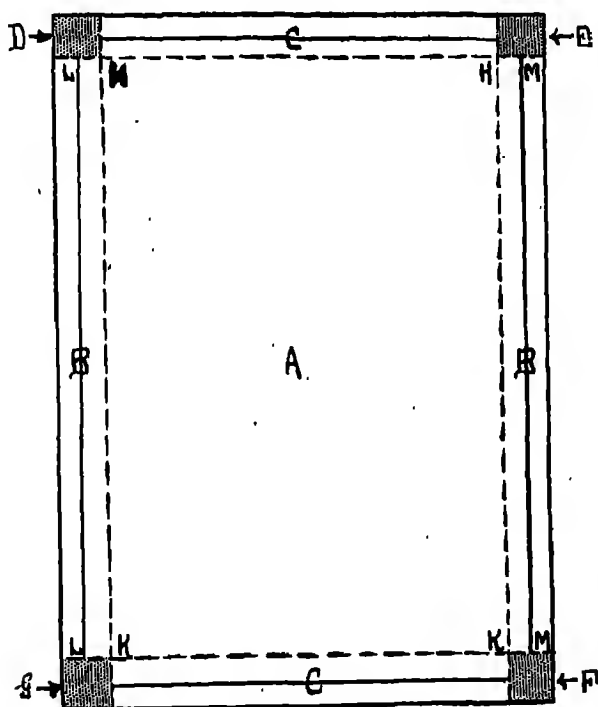


FIG. 64.—TWO-PIECE DAY BOOK BOX.

places at each corner is arranged for, and this goes through the end C, through the flap F, and into the side B.

With regard to dimensional data it will be obvious that this model may be had in many sizes. The following, however, are typical dimensions taken from an actual example:—

Total length, 11 $\frac{1}{4}$ inches; total width, 6 $\frac{3}{4}$ inches; depth of trough (the depth of the lid being substantially less),

$1\frac{3}{4}$ inches; total weight uncharged taking both portions together, nearly $1\frac{1}{2}$ ounces. This model is neither supplied paper-covered nor printed, the calendar manufacturers attaching to it as a matter of fact their own labels, etc.

Fig. 64 shows the lid only of a very handy model tray box for the sale of specially expensive gift books. In this example A is the lid top, B, B are its sides and C, C are its ends. The corners are joined by extra stout heavily glued paper or even cheap cloth flaps, the exposed portions of which are shown shaded at D, E, F, and G. Right-angled bends are arranged for, as will be expected, along the lines HH, HK, KK, and KH. While the whole of the outer surface of the lid is paper-covered in grey, the inner paper margin of the lid sides is shown by the lines LL, and MM, similar margins which are not lettered being upon the ends C, C.

The trough of this box is exactly similar to the lid, except, of course, that it is a shade smaller, and except that its base is covered with white paper instead of with the good quality grey used for the lid. No print of any kind is demanded either on the outer or inner surface of this model, book publishers attaching to it their own printed labels.

The following are dimensional particulars :—

Total length, $6\frac{1}{4}$ inches; width of front, $4\frac{1}{4}$ inches; depth of box, $\frac{3}{8}$ inch; total weight uncharged weighing both portions together, just under $1\frac{1}{2}$ ounces.

MODELS MADE IN THREE AND FOUR PARTS

My last two examples in the present chapter are concerned with boxes made in three and four parts respectively. In the case of Fig. 66 only two parts are shown, but the other two are exactly the same except for a very slight difference in size.

Fig. 65 illustrates a special type of watchmakers' model already referred to in my opening paragraph. Taking the lid or cover first, A is the lid top, B, B are its sides, each of which contains a thumbhole shown at X, X, while C, C are its ends. Right-angled bends are arranged for along the lines FF, FG, GG, and GF. The corners are joined by extra

stout heavily gummed paper flaps, the exposed portions of each of which are shown shaded at D, E, E, and D.

With regard to the trough, A is its base, B, B are its sides,

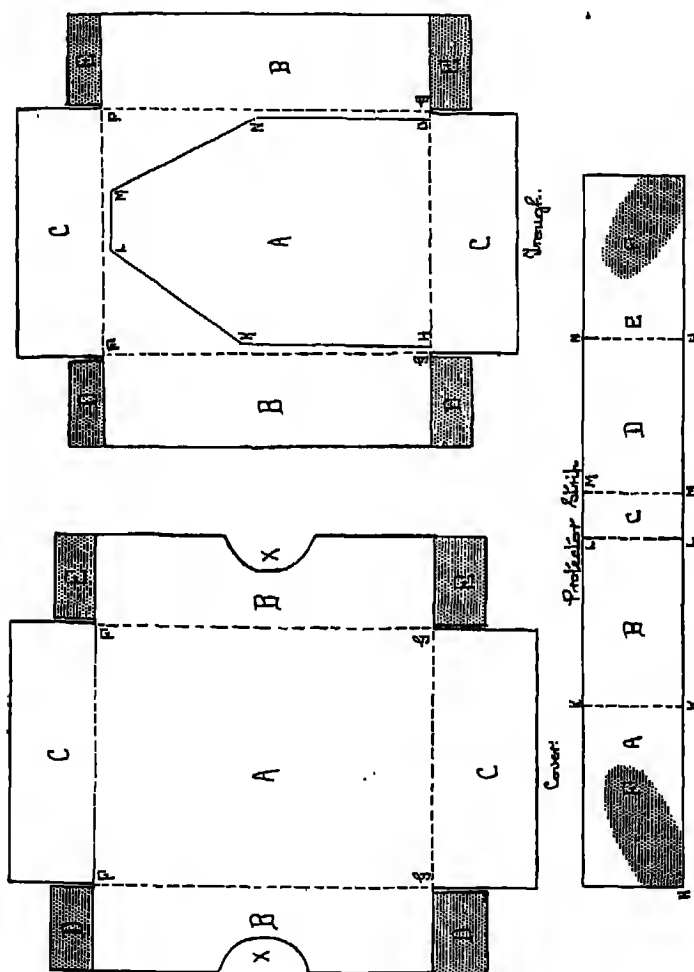


FIG. 65.—THREE-PIECE WATCHMAKERS' MODEL.

attachment, otherwise the protector strip, the actual position of this when arranged on edge is shown at HKLMNO in the trough. The strip itself is sketched out, as will be seen below, and the same lettering is used for the edge which is attached to the base A of the trough. Angular bends must be arranged for, as will be expected, at KLMN, but as will be seen by examination of the figure these are not right angles. The strip must be heavily glued in two places, these being shown by the shaded portions F on A and F on E. The portion of the protector depicted by HK fits fast to the trough side B when it is bent up, while the corresponding extremity NO also firmly adheres to the right-hand trough side B when this is bent up.

With regard to dimensional details relating to this very interesting and much-used model, they are as under :—

Total length, 3 inches; total width, $2\frac{1}{4}$ inches, *i.e.*, this box is not quite square; total depth, $\frac{7}{8}$ inch; total weight uncharged taking all the three portions, *i.e.*, including the protector strip, rather over $\frac{1}{2}$ ounce. No printing is demanded on this model as watchmakers attach thereto special labels. A paper covering, the internal margins of which are not illustrated, is usually demanded both in the case of the cover and the trough.

Fig. 66 shows a four-piece oval example in which French confectionery, *i.e.*, fruits, confits, etc., is sold. It seems hardly necessary to sketch out all four portions, as the base is identical with the lid except for being a shade smaller, while the oval side of the base or trough of the box is identical with that of the lid excepting again for a slight difference in size.

The lid top itself is strictly oval in shape, and is made of rather stout buff card. The oval side is made of similar material, and owing to the peculiar shape of this model there are no depictable bends. A distinct method of joining the two ends of the oval side may be specially mentioned, taking the form of a stout rectangular heavily gummed paper flap, one portion of which is shown at F, and a bend is made in this along the line GG, which, instead of being merely a right angle, is a double bend, so that F is completely concealed behind the strip.

The whole of the lower edge is heavily glued, and attached to the extreme outer margin of the lid in the direction

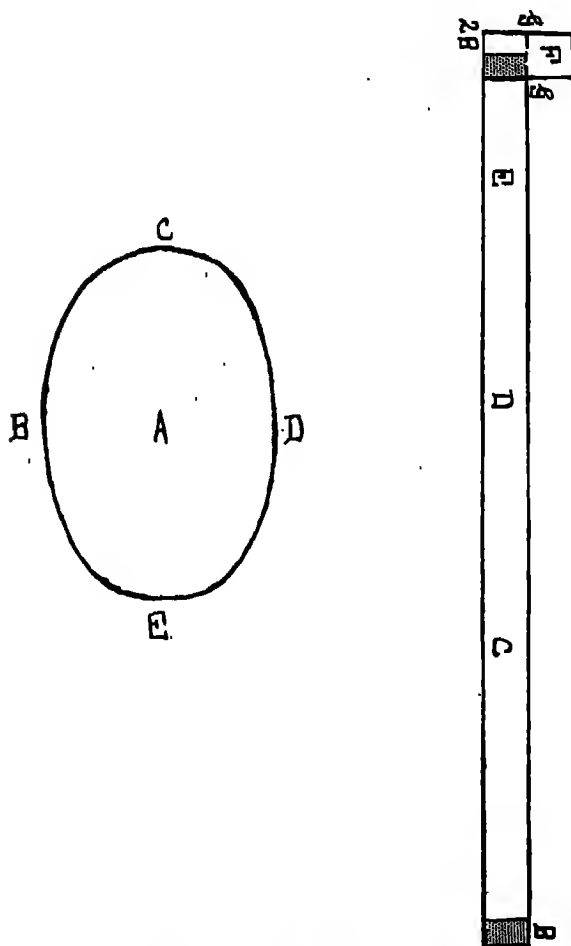


FIG. 66.—FOUR-PIECE OVAL EXAMPLE CONTAINING FRUIT CONFITS.

BCDE. When this has been done the shaded portion B of the oval side is found to be behind the unshaded portion 2B of the paper attachment flap above referred to. This is then firmly fixed to it, and F is bent over behind, so that it is

attached to each end of the side and firmly holds both in place.

As to dimensional data, the measurements are set out below :—

Total length of oval lid, *i.e.*, measured along CAE, $7\frac{1}{2}$ inches ; total width of the same, *i.e.*, measured along BAD, 5 inches ; total depth, 1 inch ; total weight uncharged calculating all four portions together, nearly 3 ounces.

With regard to the finishing of this interesting example, it will be quite sufficient in many instances to supply it to the trade without any paper covering internal or external. Those boxmakers, however, who specialise in foreign confectionery examples should always be willing to supply an internal covering of stout greaseproof paper, and an external paper covering in an attractive two, three, or four colour-design. On this print may be demanded in several languages, while both metric and English weights may also be called for in some instances, in order to inform the public that the container holds a definite quantity of some special confectionery line.

CHAPTER XIII

IN more than one of the previous chapters attention has been called to the fact that box and packet models which outwardly appear somewhat similar may be required by very different types of industrialists. This is again brought home in the case of the early examples taken up for discussion in the present chapter. All are single-piece models of a comparatively simple character, and by means of small adjustments of the machines, especially in the case of Figs. 68-70, it is possible to manufacture each in large quantities. It is a far cry, however, from the crayon industry to the toothpaste trade, or again from the soap industry to the blackboard chalk factory, and hence box makers who take up these examples will be able to congratulate themselves that they are covering a wide range of interests with their containers ; and hence, also, if trade happens to be depressed, say, in the toothpaste trade, it may be made up by the sale of more boxes to soap producers.

SINGLE-PIECE SKIN FOOD AND DENTAL CREAM PACKETS

Fig. 67 illustrates a very popular and extremely convenient single-piece model in which circular pots of various semi-solid skin preparations are sold to the public by pharmaceutical chemists and toilet specialists. In this drawing A is the top of the box, and L is its base. H and K are its sides respectively, and M is the attachment flap, which is generously covered with adhesive as will be gathered from its shading, and attached to the back of H so that its inner margin U2U corresponds with the outer margin of H shown at Q2Q. Both the sides are extended in each direction by a pair of subsidiary flaps, *i.e.*, F and N in the case of H, and G and P in the case of K. The top is extended in the form of double ends shown at B and D and C and E respectively, or to put it another way B and C are the ends

proper, and D and E are the end flaps. In order that all these portions may operate with entire independence, slits are made along the lines XR, 2XS, Z₂R, and 2Z₂S. Right-angled bends are then arranged for along the pair of dotted lines QRST, and 2Q₂R₂S₂T, as well as along the shorter dotted lines V₂V, W₂W, R₂R, S₂S, T₂T and U₂U. Apart from the attachment flap M, adhesive is not required on any other portion of this packet.

The following dimensional details relate to this model :

Length and width, $1\frac{7}{8}$ ins. each, *i.e.*, the top and base

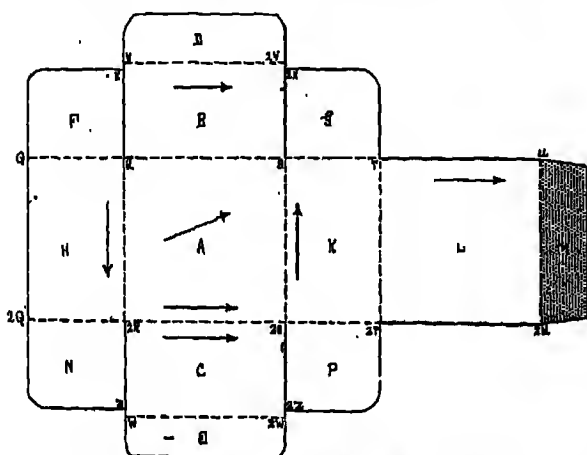


FIG. 67.—SMALL SINGLE-PIECE PACKET, FOR SALE OF CIRCULAR POTS OF SOLID SKIN PREPARATIONS.

are square ; depth, $1\frac{1}{8}$ ins. ; total weight, uncharged, just under $\frac{1}{4}$ oz. This model is not usually supplied paper-covered, but is printed on the outer surface only on A, B, C, H, K and L in the directions depicted by the arrows.

Fig. 68 shows a recently introduced model for the sale of tubes of a popular toothpaste. In this instance A is the front and B is the back, D and E being the sides respectively, and C is the attachment flap, which is heavily covered with adhesive and then attached to the back of E so that it corresponds with the shaded portion of that side. The back is extended by a top H and a top flap K, while the front is extended in the other direction by a bottom F and

a bottom flap G. Each side is extended by a pair of subsidiary flaps shown at L, L, in the case of D, and M, M, in the case of E. One corner of each of these is rounded. To secure the independent operation of the various parts, cuts are made along the lines WQ, XR and 2PV. Right-angled bends are then arranged for along the dotted lines N₂N, P₂P, Q₂Q, R₂R, as well as along the rather shorter lines

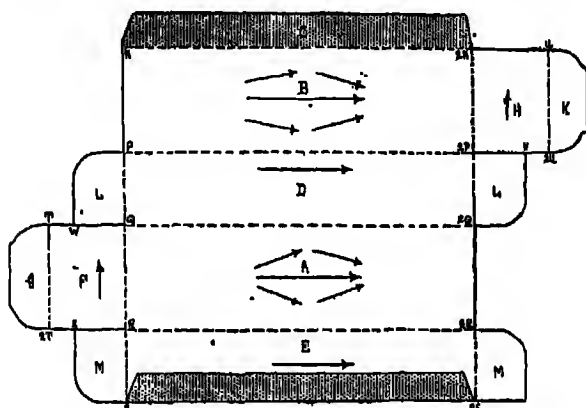


FIG. 68.—POPULAR SINGLE-PIECE PACKET FOR SALE OF SIXPENNY TUBES OF TOOTH PASTE.

T₂T, PQR₂S, 2N₂P₂Q, 2R₂S and U₂U. The top and bottom of this packet are not sealed.

With regard to the dimensions of this useful model, they are as follows :—

Total length, otherwise height, $4\frac{1}{4}$ ins. ; width of front, $1\frac{1}{2}$ ins. ; width of side, 1 in. ; total weight, uncharged, $\frac{1}{4}$ oz. This model may or may not be demanded paper-covered, but printing in several directions depicted by the various arrows on the different parts is certain to be asked for.

SIMILAR SINGLE-PIECE MODELS FOR TWO DIFFERENT TRADES

In Fig. 69 a convenient chalk and crayon box is shown. In this eighteen sticks of chalk or different coloured crayons can be conveniently packed without any paper wrapping

or other protection. Taking the various parts, A is the front and B is the back, D and E being the sides respectively, while C is the attachment flap, which is heavily covered with adhesive and then attached to the back of E so that it corresponds with the shaded portion of that side. The front is extended in a downward direction by a base G, and a base flap H, while the back is extended in an upward direction by a top N and a top flap M. The sides are extended by small flaps in each direction, shown at K and

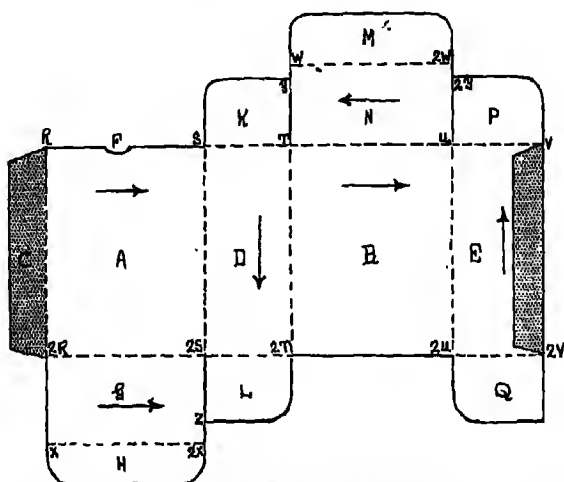


FIG. 69.—USEFUL SINGLE-PIECE EXAMPLE FOR BLACKBOARD CHALK AND CRAYON COMPANIES.

L in the case of D, and P and P and Q in the case of E. Cuts are made to secure independent operations along the lines YT, 2SZ and 2YU. Right-angled bends are then arranged for, having, of course, cut out the thumbhole F in A, along the dotted lines R2R, S2S, T2T, U2U, and also along the similarly dotted lines W2W, STUV, 2R2S2T, and still further along the very short line 2U2V and along the rather longer one X2X.

With regard to dimensional data, these are set out below:—

Width of front, $2\frac{1}{8}$ ins. ; width of side, $1\frac{3}{8}$ ins. ; height of packet, $3\frac{1}{4}$ ins. ; total weight, uncharged, just over $\frac{1}{4}$ oz. This model is usually demanded paper-covered on its entire

outer surface. Printing is also demanded on those portions of the outer surface arrowed, the direction of the print being that of the arrows in every case.

Fig. 70 shows a single-piece model in which pats of soap are sold. Box makers know, of course, that soap manufacturers are selling soaps merely paper wrapped, but it is

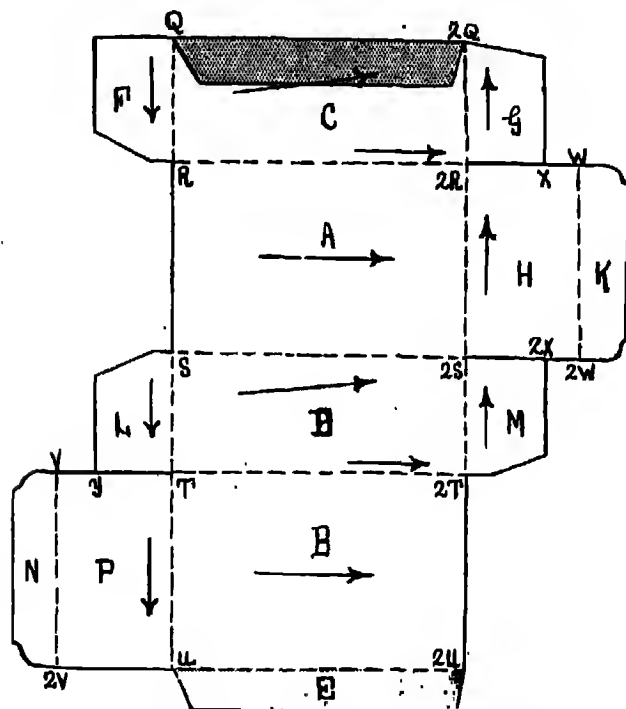


FIG. 70.—MUCH USED SINGLE-PIECE MODEL FOR SALE OF POPULAR PRICED PATS OF SOAP.

far better to interest them in the sale of soap in these thin cardboard cartons, which can be offered at competitive prices. In the example before me, which is a horizontal and not an upright model, A is the top and B is the base, C and D are the sides, and E is the attachment flap, which is heavily covered with adhesive, and attached to the back of C so that it corresponds with the shaded portion of that side.

The ends of this example are shown at H and K, and P and N, each end being provided with an end flap shown by the second letters. The sides are extended in both directions by angular flaps F and G, and L and M. These are separated from the ends by cuts made along the lines 2RX, 2S2X, and YT. Right-angled bends are then arranged for along the lines R2R, S2S, T2T, U2U, as well as along V2V, QR, UTS, 2Q2R2S2T, and W2W.

The following dimensional data relate to this model :

Length, $3\frac{1}{8}$ ins. ; width, $2\frac{1}{8}$ ins. ; depth, $1\frac{1}{8}$ ins. ; total weight uncharged, just under $\frac{1}{2}$ oz. This model may or may not be demanded paper covered, but is certain to be asked for in a printed condition on the outer surface. The direction of the print and the parts which are covered therewith are clearly shown by the arrows, but box makers should note that in the case of the sides C and D print is carried in two directions as shown by the pairs of arrows on these. Even the small flaps F, G, L and M, which on most models are blank, are here filled up, and no less than five lines of print are packed into each.

TWO-PIECE AND MANY-PIECE MODELS

Fig. 71 shows a two-piece model in which metallic paper clips, otherwise fasteners, are sold to the public by the stationery industry. Taking the trough first, A is the base and B, B are the sides, C, C being the ends. Right-angled bends are made along the lines EE, EF, FF and FE. The corners are joined by the usual corner flaps of heavily gummed paper, or in some cases merely by the outer paper covering. The inner margin of the latter is shown on the sides B, B by the lines KK and LL. The whole of the base is not paper covered, the rectangle inside GGHHG being bare cardboard.

Taking the lid, A is the top, B, B are the lid sides, and C, C are the lid ends. The shaded portions D, D are the paper sealing flaps with which this model is provided. Only the exposed portions are illustrated, but the concealed portions, *i.e.*, those attached to C, C, are in practice usually about half the width of the shaded strips. When the box has been

charged these gummed flaps are moistened and attached to the ends C, C of the trough after putting on the lid. As soon as the glue dries there is no danger of the paper fasteners slipping out.

Right-angled bends are arranged for as will be expected in the case of the lid along the dotted lines EE, EF, FF and FE, while the inner margin of the paper covering is again

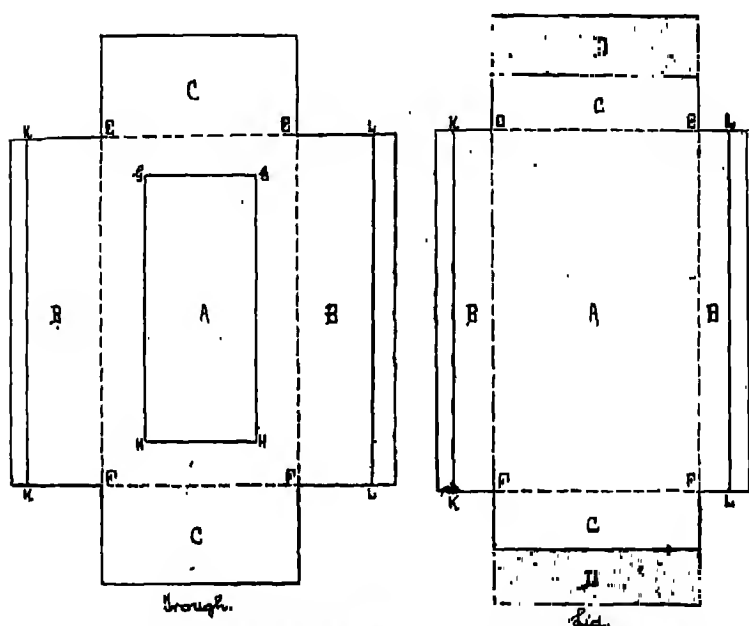


FIG. 71.—TWO-PIECE MODEL FOR SALE OF STATIONERS' METAL PAPER FASTENERS.

shown on the sides B, B by the lines KK and LL. A similar margin, of course, is pasted on the ends alike of the trough and the lid, although this is not illustrated. In most models the lid itself as regards its outer surface is entirely paper-covered, but neither the outer nor inner surface alike of the trough or lid carry any print of any kind, as the paper fastener manufacturers use their own adhesive labels for the lid top after charging.

With regard to the dimensions of this interesting two-

piece example, the total length is $3\frac{1}{2}$ ins., while the width is $1\frac{3}{4}$ ins., and the depth is 1 in. The total weight uncharged, taking both pieces together, including the heavily gummed sealing flaps, is just over $\frac{1}{4}$ oz.

Fig. 72 illustrates a model which may well be termed a many-piece example, in view of the fact that no less than seven portions are necessary for its successful manufacture. The main lid is first illustrated, and of this A is the lid top, B, B are its ends, and C, C are its sides, or perhaps one had better term them the front and the back. Right-angled bends are arranged for along the lines, DD, DE, EE and ED. The corners may be joined by heavily gummed paper flaps, but these are not illustrated in the drawing, as there are several variations of corner attachments in different examples.

We must next consider the outer lid plate, which is always paper-covered. The plate itself is shown at A, which is approximately the same size as the inner lid plate shown below. The shape of the paper covering which conceals A is shown by the portions C, B, C, B, A, and after putting the textile pad (which may consist of many different kinds of fibrous material) on the inner lid plate, and then facing this with the outer lid plate, double right-angled bends are made along the lines DD, DE, EE and ED, so as to hold these parts together. We then have a one-piece padded lid top, and this is heavily glued on its under surface, and attached to the main lid top already described and depicted at A above.

The trough portion of this packet is made in three distinct parts, of which the most important is the main base, shown at A and B. No bend is made between these two portions, and the shaded strip B is merely illustrated to show how the outer side is attached. The inner sides and ends of the base are illustrated in the form of a long strip A, B, C, D, right-angled bends being made at FF, GG and HH. The end D is not attached to the side A except by a minor paper covering.

Now, as regards the outer sides and ends of the trough portion of this packet, these are shown by a longer but

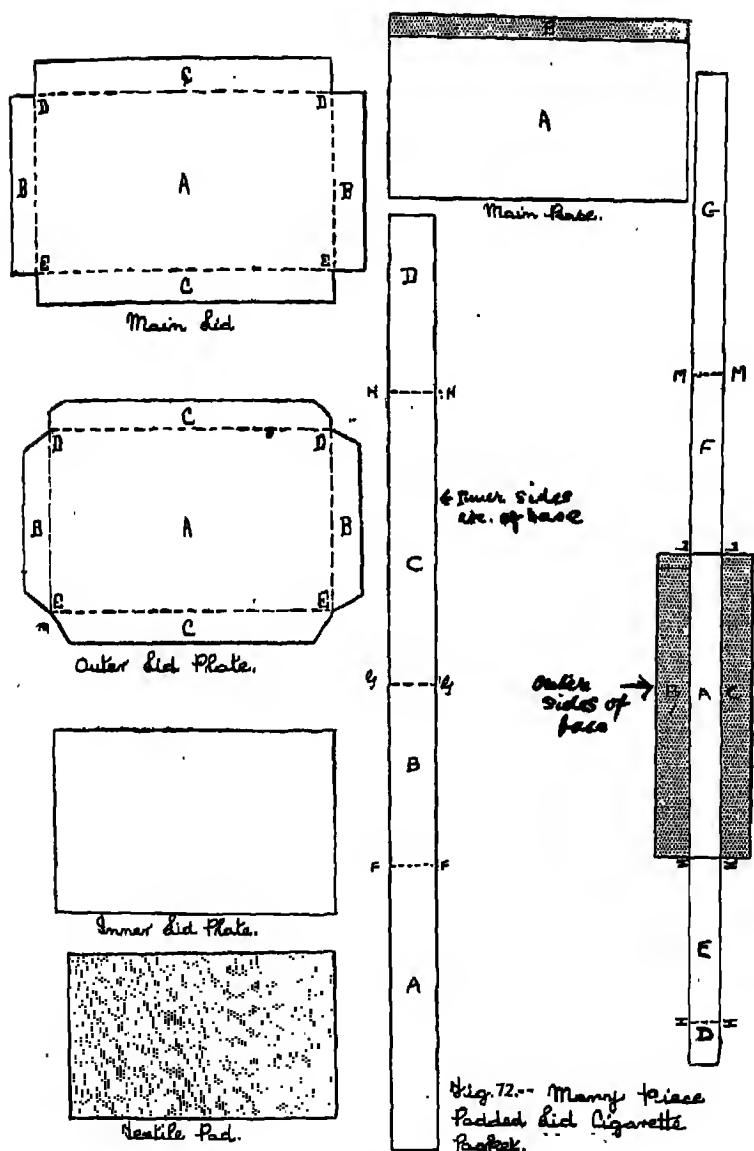


FIG. 72.

rather narrower strip D, E, A, F, G, right-angled bends being made along the lines HH, KK, LL and MM. The shaded portion C extending below the side A consists of stout heavily gummed paper, and this is attached to the shaded strip B on the main base already commented upon after bending at right angles along KL. Similar strips emanate from E, F and G, and are attached in a similar manner to the end and opposite side of the main base. The small rectangle D is a stout heavily gummed flap of paper, only the exposed portion of which is shown. This is attached to the extremity of the side, and the outer trough is then complete. The inner sides after bending fit tightly into the outer trough, and are glued on their unexposed sides to the back of E, A, F and G of the outer trough. The shaded strip B emanating from A is a hinge flap of gauze or extra stout heavily glued paper, and to this the upper lid side C, otherwise the back side of the lid A, is attached, and the model is then complete, this flap acting as a hinge.

With regard to dimensional data, the total length of this example is $4\frac{3}{4}$ ins., while the width is 3 ins., and the depth is only $\frac{3}{4}$ in. The thickness of the textile pad when compressed is $\frac{1}{16}$ in. The total weight uncharged, taking all the seven pieces together, *i.e.*, including the textile pad forming part of the compound lid, is just under $1\frac{1}{2}$ ozs. The whole model is paper-covered on all its outer and inner exposed surfaces, cream or white paper being greatly favoured. The paper covering of the outer lid plate usually carries print on A, while the main base A, as a rule, again carries a little print on its outer surface. Apart from these, the other portions of the model are not used for advertising purposes, except the under or inner surface of the main lid A, and even here the printing demanded is usually of a simple character.

CHAPTER XIV

It seems desirable to take up for discussion in the present chapter half a dozen models which in every case are made in single pieces. A good many members of the box trade are solely interested in the production of such boxes and packets, and find they can turn them out in large quantities easily and cheaply, the prices competing in most instances with examples made in two or more pieces. Some of these single-piece examples are, however, rather extravagant with regard to the quantity of adhesive that must be employed, but in the case of the paper-bound example no adhesive of any sort is used on the model itself, as will be seen from the diagram, one strip upon the paper covering, *i.e.*, that which overlaps, being glued, and sufficing to hold the whole together.

Several of the models in this chapter are somewhat similar to each other, although the industries taking them are widely different. Besides the industries mentioned in the present chapter, other types of traders are interested in the present examples, and hence box makers who arrange to manufacture them will find that there is a big demand for them.

**SINGLE-PIECE EXAMPLES FOR FLAKED FOODS
AND OFFICE ADHESIVES**

Fig. 73 shows one of the largest single-piece models we have had so far. In this drawing A is the front of the box and B is the back. C and D are its sides, and E is the attachment flap, which is heavily covered with adhesive (as are its extensions N and O), and then attached to the back of D so that its inner margin Q2Q corresponds with the outer margin of that side shown at U2U. The extensions of this then adhere to the backs of L and M respectively.

The front is extended in a downward direction by a base K, and in an upward direction by an under-lid J. The back is extended in a converse direction, *i.e.*, by a lid F, and an under-base flap G. The sides are extended in both directions by small flaps H, L, I, M, and in order that all these may operate independently cuts are made along the lines WR, XS, YT, 2R2W, 2S2X and 2T2Y. Right-angled bends are then arranged for along the lines PQRSTU, 2P2Q2R2S2T2U, and also along the much shorter lines Q2Q, R2R, S2S and T2T. A lot of adhesive is required by

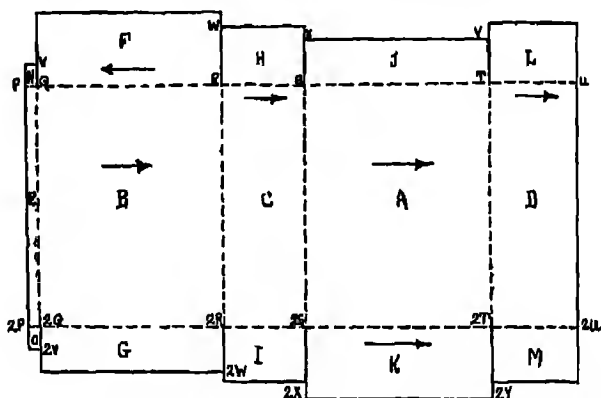


FIG. 73.—SINGLE-PIECE HALF-POUND FLAKED FOOD PACKET.

this model, mainly on the undersides of F and K, but in some examples adhesive is also used on H, I, L and M.

The dimensions of this useful model are as follows: Width of front, $6\frac{1}{2}$ ins.; width of side, $2\frac{3}{4}$ ins.; depth or height, $8\frac{1}{2}$ ins.; total weight uncharged, just 2 ozs. This model is usually supplied paper-covered on the entire outside surface, the printing being in the direction of the arrows and only on the portions arrowed.

An entirely different, and more or less cubical, model is used as a containing-packet for pots of a popular office adhesive. This is sketched out in Fig. 74, and its various parts are briefly indicated.

First of all, A is the front, and B is the back, D being one side and EF the other side, while C is the attachment flap,

which, after being heavily covered with adhesive, is attached to the back of F. As will be expected, the back is extended in an upward direction by a top or lid G, and a lid flap H, while the front is extended in a downward direction by a base J and a base flap K. The sides are extended in both directions by angular flaps sketched out at I, I, L, L. The shapes of these should be carefully noted. To render the independent operation of these possible, cuts must be made along the lines TN, UP and VQ. Right-angled bends are

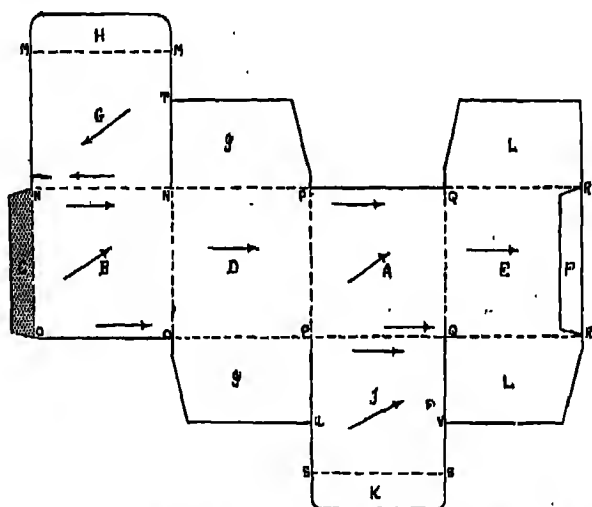


FIG. 74.—SINGLE-PIECE CUBICAL PACKET FOR SALE OF OFFICE ADHESIVE PASTE.

then arranged for along the lines MM, NNP, QR, OPQR, SS, NO, NO, PP and QQ. No glue or other adhesive is used on the lid or base or upon their flaps.

With regard to dimensional data, the length and width of this example are $2\frac{3}{4}$ ins. each, *i.e.*, the lid surface is square. The depth is $2\frac{1}{8}$ ins., and, therefore, this example, although cubical, is not a perfect cube. The total weight unchanged is exactly $\frac{1}{2}$ oz. The model is always demanded attractively printed, and may be ordered paper-covered over its entire outer surface. Printing, as a rule, is only found on the portions arrowed, and is again on the outer

surface only of the model. This print, though comparatively simple in character, is, as will be seen, in several directions.

SINGLE-PIECE MODELS FOR MILK CHOCOLATE AND PLAIN BISCUITS

Fig. 75 shows a neat little once-glued example much used by packers of milk chocolate. In this drawing A is the front, which carries a thumb-hole I, while B is the back. The two sides are shown at C and D respectively, while the top flap is shown at H, the top itself at 2H, the base at 3H, and the base flap at H. The sides carry small extensions or subsidiary flaps sketched out at F, F, and G, G, one corner

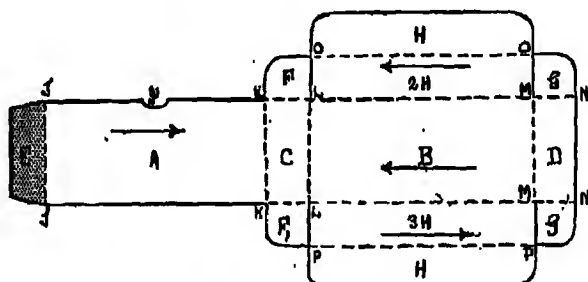


FIG. 75.—SINGLE-PIECE ONCE-GLUED EXAMPLE FOR MILK CHOCOLATE INDUSTRY.

of each of these being rounded as indicated. Cuts are made along the lines OL, OM, LP and MP to secure the independent operation of these flaps. Right-angled bends are then arranged for along the lines OO, KLMN, NMLK, PP, JJ, KK, LL, and MM. The attachment flap E is heavily covered with adhesive, as indicated by its shading, and then attached to the back of D, which is almost completely concealed. Adhesive is used nowhere else throughout this model.

The dimensional data relating to this model are now given: Length of front, $3\frac{1}{2}$ ins.; depth or height, $1\frac{1}{2}$ ins.; width of side, $\frac{5}{8}$ in.; total weight uncharged, just under $\frac{1}{4}$ oz. An outer paper covering, orange in colour, is favoured, while printing thereon in the direction of the arrows (and only on the parts arrowed) may be ordered in several colours, e.g., in chocolate-brown, maroon, golden-yellow, etc.

Fig. 76 shows a single-piece biscuit packet which might have been described as an unglued model. It is, however, convenient to take it as a paper-bound packet, owing to the fact that its exterior covering of paper holds it together, although the paper used is not adhesive paper, its two extremities being attached by a thin strip of adhesive on the underside of one of them, shown shaded at C.

Taking the various parts, A is the front of the example and BCD is the back. The two sides are shown at E and E, but in this case F is also a side, fitting as it does at the

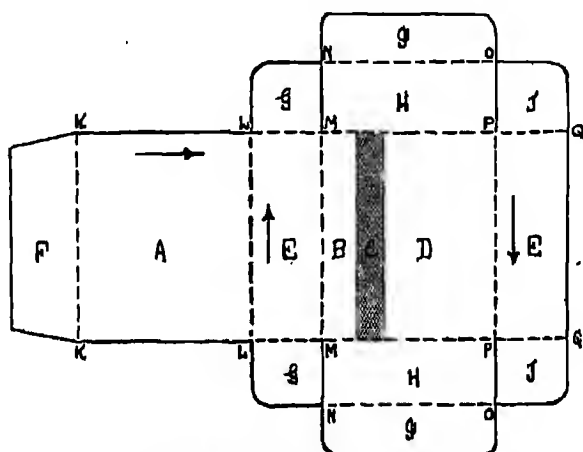


FIG. 76.—SINGLE-PIECE PAPER BOUND PACKET FOR SALE OF PLAIN BISCUITS.

back of the right-hand E. A quartette of small subsidiary flaps, one corner of each of which is rounded, form extensions of the two sides E and E, these being indicated by the letters G, G, J, J. They are separated from the top H by slits NM and OP, as well as from the bottom H by slits MN and PO. The top is extended in an upward direction by a small flap I, both of its outer corners being rounded, while the base is extended in a downward direction by a similarly shaped flap, also indicated by the letter I. Right-angled bends are arranged for along the lines NO, LMPQ, QPML, NO, KK, LL, MM and PP. The paper covering forms a large rectangle within the figure made by KQQKK, and

is only doubled and sealed along the shaded strip C on BCD. This paper covering is, as a rule, printed on A, E, and E, but not on the back BCD. The model itself is not used for carrying any print.

With regard to dimensions, these are as under: Total length, $2\frac{1}{2}$ ins. ; width of side, 1 in. ; depth or height, 3 ins. ; total weight uncharged, exactly $\frac{1}{4}$ oz.

SINGLE-PIECE PACKETS FOR SALE OF SULPHUR AND YEAST TABLETS

The enormous demand for sulphur tablets, and the very largely increased use of yeast in medicine, has led to the introduction of packets for tablets of these. Two of the most useful examples are sketched out in the drawings, Figs. 77 and 78.

Taking the various parts of Fig. 77, A is the front and B is the back, D and E being the sides, and C the attachment flap, which, after being well glued, is attached to the back of E, so that its inner margin N2N corresponds with the outer margin of E shown at S2S.

In this case the back is extended both in an upward and in a downward direction by a top K, and a top flap J, also a base L, and a base flap M. The sides are also extended in both directions by small flaps of approximately their own size, but shown by the letters F, G, H, I. Cuts are made along the lines UQ, 2QV, 2UR, and 2V2R, thus securing the independent operation of all the parts. Very short right-angled bends are arranged for along the lines N2N, OP, Q2Q, and R2R, rather longer ones being made along the lines T2T and W2W, while still longer but otherwise similar bends are required along the lines OQRS and 2S2R2QP. Adhesive is only required in this case on the attachment flap C.

With regard to dimensions, the total length of this model is 3 ins. exactly, while its width is 2 ins. The depth of the packet is only $1\frac{3}{4}$ ins., however, and hence D and E are not quite square. The total weight uncharged is just under $\frac{1}{4}$ oz., while the model is often wanted paper-covered on its entire outer surface, bright golden yellow being favoured,

instead of pale sulphur yellow, as might be expected. Much printing is required on the outer surface of this example, *i.e.*, on A, D, B, E, K and L. The direction of the print is that indicated by the arrows.

Fig. 78 shows a paper-sealed packet similar in itself to several we have already had, but different in the method employed for preventing the contents being pilfered. In this example A is the front and B is the back, D and EF

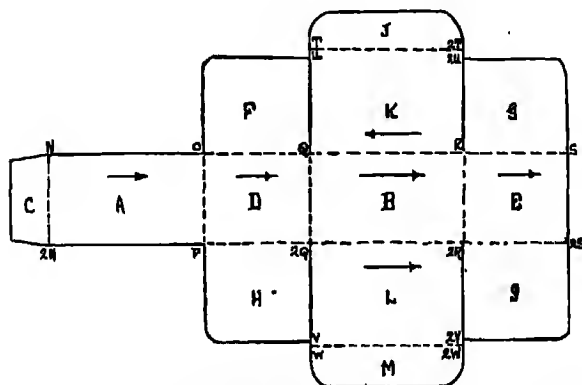


FIG. 77.—SINGLE-PIECE PACKAGE FOR SALE OF PAPER-WRAPPED SULPHUR TABLETS.

being the sides, while C is the attachment flap, which is heavily covered with adhesive and then attached to the back of F. The sides are extended in an upward and downward direction by small flaps J, N, M and J, one corner of each of which is rounded. The front is extended in a downward direction by a base LK, and a base flap O, while the back is extended in an upward direction by a top GH, and a top flap I. Cuts are made along the lines Z_2S , $2V_2Z$, and W_3Z , so that the various parts may operate independently. Right-angled bends are then arranged for along the lines R_2R , S_2ST , U_2T , V_2VW_2W , and X_2X , as well as along the other dotted lines indicated by S_2U , $2SV$, T_2V , and $2TW$. This packet is usually demanded paper-covered on its entire outer surface, and printed in black in the direction of the arrows and only on the portions arrowed.

With regard to the sealing flap, this is sketched out

already attached to the base of the packet, and forms the rectangle $2A_2C_2D_2B_2A$, or more simply it consists of the shaded portion L, the shaded portion M, the unshaded portion P and the unshaded portion Q. Right-angled bends are in this case arranged for along the lines W_2X and Y_2Y . The portion Q fits over the shaded portion G, which it completely conceals, and is attached in such a way that the seal is broken on opening the packet. As the other end is also attached by adhesive, as indicated by the shading of L, it is quite impossible to open this packet without the

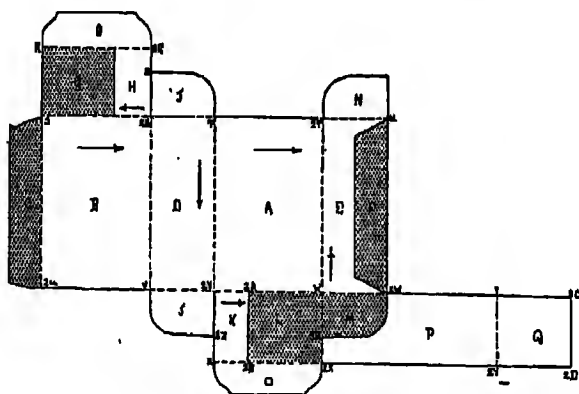


FIG. 78.—SINGLE-PIECE SEALED PACKET FOR PHARMACISTS' YEAST TABLETS.

customer finding out. While in some examples the patent medicine stamp duty label is used for sealing purposes, in other cases makers employ specially printed paper sealing strips, and use them for advertising other lines. Box makers will, therefore, be required to print the sealing strips in some instances, and in most cases printing will be demanded upon the outer but not upon the inner surface of the packet itself in the direction of the arrows.

With regard to dimensions, the width of the front is $1\frac{1}{2}$ ins., while the width of the side is 1 in. The depth or height of this example is $2\frac{1}{2}$ ins. exactly, while its total weight uncharged, allowing for the paper sealing flap, is rather under $\frac{1}{4}$ oz. It should be added that larger sizes of this example are often ordered, but not smaller ones as a rule.

CHAPTER XV

IN previous chapters the production of large-size outer packings or boxes for the protection of small packets of different classes of goods has rather been neglected, but in the present chapter one of these outer packings is, as will be seen, taken up for description and illustration. This example forms one of a type, and although the particular trade is in this case the chocolate industry, others of a very similar character find wide application in other industries, and may well be offered to such by box makers.

Ordinary rectangular cardboard boxes are sometimes used as outer containers for already charged packet goods, and this fact should never be overlooked. Thus, in the case of the seedsman's box illustrated in the present chapter, models very similar to this are constantly cropping up in the packing trade, and are used for the sale of packets containing many different materials, from toothpaste to photographic chemicals.

A PAIR OF SINGLE-PIECE PACKETS

Fig. 79 illustrates a non-printed one-piece packet which is widely used alike by pharmacists and manufacturers of photographic products. These industrialists want a container which will hold their various powders which are already made up into paper packets. This one is characterised by the fact that only a very small quantity of adhesive is required, in fact, it practically holds itself together when folded and charged without.

Taking the various parts, A is the front and B is the back, C and D are the two sides, and N is the attachment flap, which alone carries adhesive as indicated by its shading. The lid or top is shown by J, and this is extended by a curiously shaped lid flap K. The base is shown at L, and

this, again, is extended similarly to the lid flap by a curiously shaped strip M. The sides are extended in both directions by semi-rectangular flaps indicated at E, G, H, and F, while to ensure the independent operation of these cuts are made along the lines PS, QT, and Y2P. Right-angled bends are then arranged for along the lines OO, RSTU, VW, ZYX, 2A2B, and also along the very short lines SW, TX, UY and ZZ.

The following are dimensional details: Length, $5\frac{3}{4}$ ins.; width, $4\frac{1}{4}$ ins.; depth, 2 ins.; total weight uncharged,

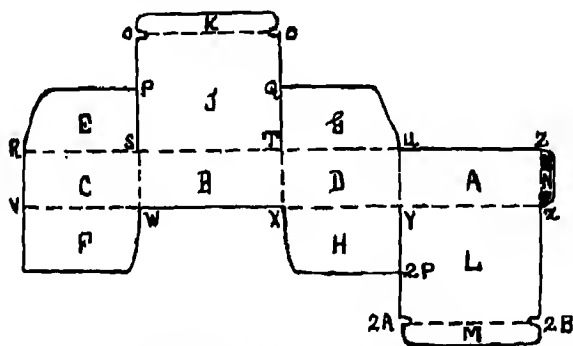


FIG. 79.—SINGLE-PIECE PHARMACIST'S AND PHOTOGRAPHER'S POWDER PACKET CONTAINER.

$1\frac{1}{4}$ ozs. This model is usually demanded paper-covered on the outer surface only.

Another very useful single-piece packet is shown in Fig. 80. Larger sizes to take men's leggings are also required, and these are manufactured from the same model.

Taking the various parts, A is the front and B is the back, C and D are the two sides, and E is the attachment flap, which is not, however, covered with adhesive, but is attached to the back of D, so that its inner margin P2P corresponds with the line T2T, by means of a sextet of wire stitches. The top and bottom are each made in four attached pieces, the various portions of the top being shown at F, G, H and K, while those of the base are indicated at L, M, N and O. Cuts are made along the lines 3QQ, 3RR and 3SS in the case of the top, and along the lines 2Q4Q, 2R4R and 2S4S in the

case of the base. The pairs of shaded strips on F and L are punched right out, *i.e.*, holes instead of slits are made, which last are, of course, the more usual. Right-angled bends are arranged for along the lines PQRST, 2P2Q2R2S2T, and also along the vertical lines P2P, Q2Q, R2R, S2S. When the wire stitching already mentioned has been carried out, the four flaps G, K, M and O are first turned in, after which

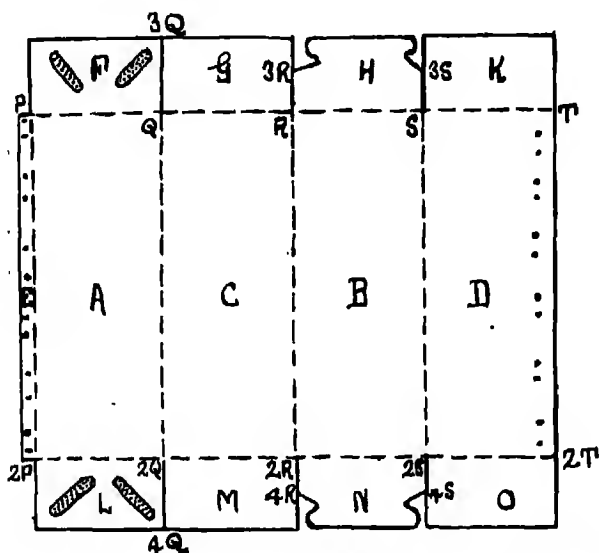


FIG. 80.—SINGLE-PIECE PACKING FOR PAIR OF YOUTH'S LEGGINGS.

F and L are folded over. The points of H and N are then inserted into the punched-out slits on F and L.

The following dimensional data relate to this useful model: Total length or height, 12 ins.; width and depth, $3\frac{1}{2}$ ins. each, *i.e.*, the top and base each form an exact square; total weight uncharged, just under $3\frac{1}{2}$ ozs. No printing is demanded, as a rule, on any portion of this model, but its entire outer surface is often ordered paper-covered.

LARGE SIZE TWO-PIECE PACKAGES

Fig. 81 shows the lid only of a dual-piece seedsman's box which at the present time is enjoying a very large sale in this

country. The trough portion is not illustrated, as it is exactly similar to the lid, except, of course, that it is a shade smaller.

Taking the various parts, A is the lid top, which, as a rule, carries four lines of print in the direction of the quartet of arrows, B and C are the front and back, while H and E are the two lid ends. These last are extended in each direction by pairs of flaps shown at F, G, K and D. Narrow strips of cardboard are taken out between F and B, G and B, K and C, and D and C, instead of just making slits, as is usually the case. Right-angled bends are then arranged for along

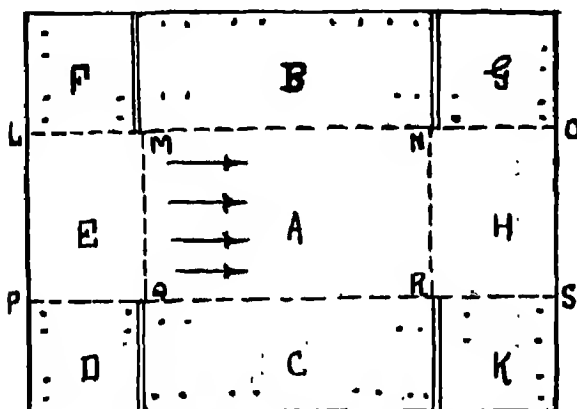
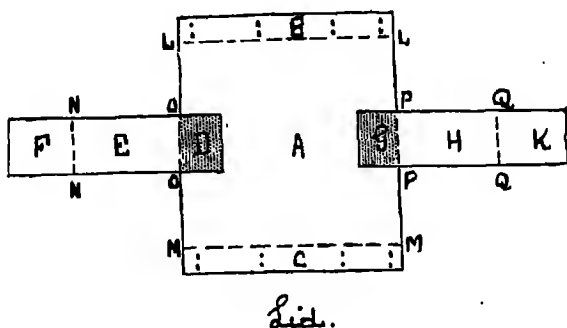


FIG. 81.—LARGE-SIZE TWO-PIECE SEEDSMAN'S PACKAGE.

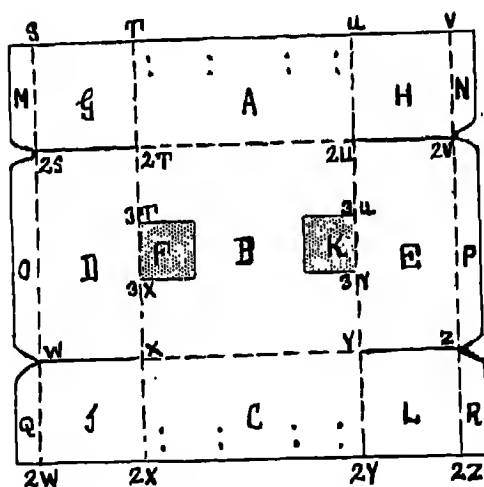
the lines LO and SP, while shorter but otherwise similar bends are also made along the lines MQ and NR. No adhesive is required either on the lid or on the trough portion of this box, nor are the two portions attached to each other therewith. A pair of triplets of wire stitches attaches F to B and G to B, while another pair of triplets, as indicated by the dots, also attaches K to C and D to C.

The following dimensional data relate to this valuable model: Total length, 10 ins.; width of end, 6 ins.; depth of box, 4 ins.; total weight uncharged, taking the cover and trough together, 9 ozs. Paper covering is generally demanded on the entire outer surface, the printing also being carried on the outer surface only.

Fig. 82 illustrates a useful type of outer cardboard box employed to contain, as a rule, a dozen quarter-pound



Lid.



Through.

FIG. 82.—LARGE TWO-PIECE OUTER PACKING FOR CHOCOLATE TRADE.

packets of chocolate. Taking the lid first, this is made both of stout cardboard and of paper. A is the main lid top and B and C are its front and back flaps, these being bent at right angles along the lines LL and MM. The strips DEF

and GHK are usually made of stout heavily gummed brown paper, and are bent twice at right angles along the lines OO and NN, and PP and QQ respectively.

Taking the trough, B is the main trough base, A being its back and C its front, while D and E are the main ends or sides. A number of subsidiary flaps are necessary to complete this model, these being shown at G, H, L and J, and also at M, N, P, R, Q and O. To secure the independent operation of the various portions, cuts must be made along the lines 2S2T, WX, 2U2V and YZ, after which right-angled bends are arranged for along the lines S2SW2W, T2TX2X, U2UY2Y and V2VZ2Z, as well as along the further pair of lines 2T2U and XY.

With regard to putting this model together, the strip B of the lid is wire-stitched on to the strip A of the trough, so that its inner margin LL corresponds with the outer margin TU. The strip C of the lid is similarly attached by a quartet of wire stitches to the strip C of the trough, so that its inner margin MM corresponds with the outer 2X2Y. With regard to the paper strips of the lid, these are then folded under the base of the box, and attached thereto so that the unshaded F of the lid conceals the shaded F of the trough, and the unshaded K of the lid conceals the shaded K of the base.

With regard to dimensional details, the total length is $8\frac{1}{2}$ ins., while the width is rather less, *i.e.*, 8 ins., and hence neither the lid nor the trough forms a perfect square. The depth is $3\frac{1}{4}$ ins., while the weight, taking both portions together, is exactly 5 ozs. Paper covering is demanded over the entire outer surface, but not the inner surface, as a rule, while no printing is generally ordered, owing to the fact that chocolate packers use their own printed labels for this purpose.

SMALL SIZE TWO-PIECE PACKINGS

Turning now from large models to small ones, Fig. 83 illustrates a dual-piece box for the sale of metal paper clips, which is generally supplied paper-sealed. The cover portion is first illustrated, the lid itself being depicted by the rect-

angle QT₂T₂QQ, the lid front being E and the lid back being shown at D. From this it will be evident that the lid top is made up of A, B and C, while with regard to the lid ends, only their extremities are visible, these being shown at F, H, I and G, owing to the fact that the main lid ends are concealed under L and M. Right-angled bends are

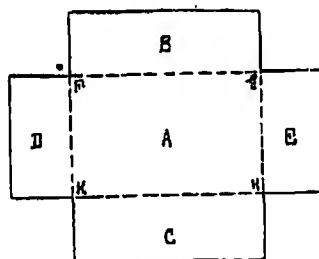
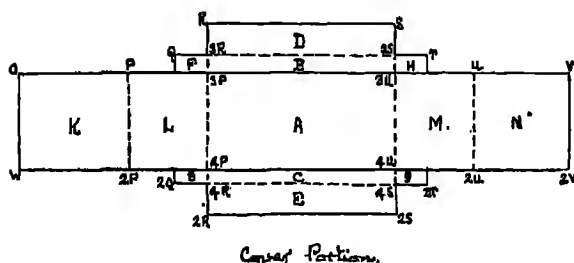


FIG. 83.—TWO-PIECE PAPER-SEALED PAPER CLIP BOX.

arranged for, as will be expected, along the lines 3R₃S, 4R₄S, and also along the lines 3R₄R and 3S₄S.

The sealing device consists of a rectangular strip of heavily gummed paper shown at OV₂VWO. That portion which covers the major part of the lid as indicated at A is usually completely affixed thereto. Right-angled bends are then made along the lines P₂P, 3P₄P, 3U₄U and U₂U, but L and M are not affixed to the ends either of the lid or of the trough. The portions K and N are, of course, very firmly affixed to the underside of the base A.

of the trough below, and pilfering is thereby completely prevented.

The other parts of the trough portion may be briefly indicated. Thus, B and C are its front and back, while D and E are its ends. Right-angled bends are arranged for along the lines FG, GH, HK and FK. The corners alike of the trough and cover are sometimes joined by the usual corner pieces of stout heavily gummed adhesive paper, but in a good many cases the paper covering over the entire outer surface (which is not indicated in this drawing) proves sufficient to hold them together.

With regard to dimensional details, the length of this

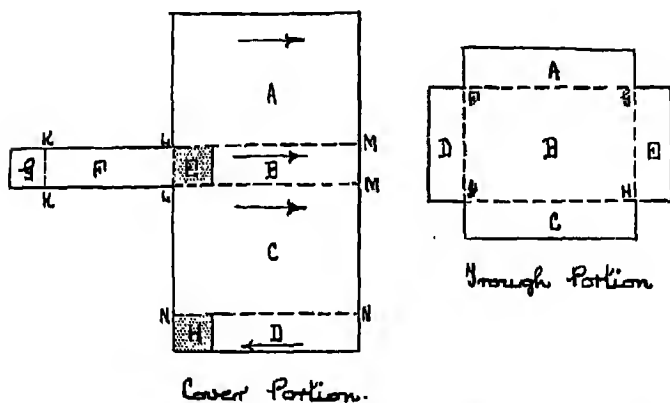


FIG. 84.—TWO-PIECE BOX FOR SALE OF PHARMACISTS' COD LIVER OIL TABLETS.

model is exactly 3 ins., its width being 2 ins., and its depth $1\frac{1}{4}$ ins. The total weight uncharged, taking the cover and trough together, and including the paper sealing device already alluded to, is just under half an ounce, from which it will be gathered that only light material is employed in its production.

Fig. 84 shows an interesting dual-piece box in which the increasingly popular tablet form of cod liver oil is sold to the public.

Taking the cover portion first, this consists of a rectangular strip of cardboard, and an extension strip of gummed

paper. The top of the cover is shown at A, the front being shown by E and B, the base being shown at C, and the back by H and D. There is no attachment flap of the usual kind here, as will be seen. The paper covering which covers the entire outer surface generally proves quite sufficient to hold this cover together, while to make doubly certain, and also to prevent pilfering, a paper sealing flap shown at GFE is provided. Of this the portion G completely conceals the shaded H on D.

With regard to the bending of this cover, right-angled bends are arranged for, as will be expected, along the lines LM and ML, and also along NN. The paper sealing strip is bent twice at right angles along the lines LL and KK. No paper sealing flap is provided at the other end of the model, owing to the fact that makers generally use the patent medicines stamp duty slip for this purpose.

With regard to the trough, this is of a simple character, the main trough base being shown at B in the second sketch, while the back and front are shown at A and C, and the two ends are shown at D and E. Right-angled bends are arranged for along the lines FG, GH, HI, and IF. The outer paper covering again proves sufficient to join the corners satisfactorily.

With regard to dimensional details, the length of this model is $2\frac{1}{2}$ ins., its width is $1\frac{3}{4}$ ins., and its depth is $\frac{1}{2}$ in. only. The total weight uncharged, taking the two cardboard portions and including the paper sealing strip, is just under $\frac{1}{4}$ oz. Printing, as a rule, is demanded on the outer surface of the cover only, and is in the direction of the arrows. The paper sealing strip is also printed, but the trough portion carries no print of any kind either on its outer or its inner surface.

CHAPTER XVI

It is by no means often that we require to use no less than eight pieces for the preparation of a single box. In previous chapters we have described and illustrated examples requiring five or six pieces, but in the present one the final example requires, as will be seen, no less than eight different strips of five distinct classes, the other three pieces being made up of duplicates.

These many-piece boxes are more expensive than others, but in most instances they are very handsome, and are used for high-priced goods, and, therefore, need not be manufactured at cut prices. As opportunity offers, I shall hope to cover other similarly elaborate boxes employed for different purposes and used by different traders.

USEFUL SINGLE-PIECE EXAMPLES

Fig. 85 shows a single-piece packet which comes very largely into this country, and is even more largely employed abroad. In this example, A is the front, and B is the back, C and D being the two sides. The top is made up of four pieces shown at I, K, L, and MN, while the bottom is again made up of four pieces shown at OP, Q, R, and S. The attachment flap is indicated at E, and this is extended in both directions by small subsidiary glue flaps F and G. The whole strip FEG is attached to the back of C so that it corresponds to the unlettered shaded portion of that side and of the end flaps I and S. To secure the independent operation of the various parts, cuts must be made along the lines V₂T, W₃T, X₄T and Y₅T, as well as along the similar lines in the case of the base indicated by 2Y₂U, 2X₃U, 2W₄U, and 2V₅U. Right-angled bends are then arranged for along the lines T₆T and U₆U, as well as along the shorter lines 2T₅U, 3T₄U, 4T₃U, and 5T₂U. The shaded portion

N of NM is heavily covered with adhesive, while the shaded portion O of OP is similarly smeared with glue, etc. After folding in I, L, Q, and S, K is folded on to NM, and R on to OP, and firmly adheres thereto.

With regard to dimensional details, the length of this model is $6\frac{1}{2}$ ins., its width is $3\frac{1}{4}$ ins., and its depth or height is $6\frac{3}{4}$ ins., thus neither A nor B is a perfect square. The total weight uncharged is just under $2\frac{1}{4}$ ozs., while printing is usually demanded on the outer surface only of those

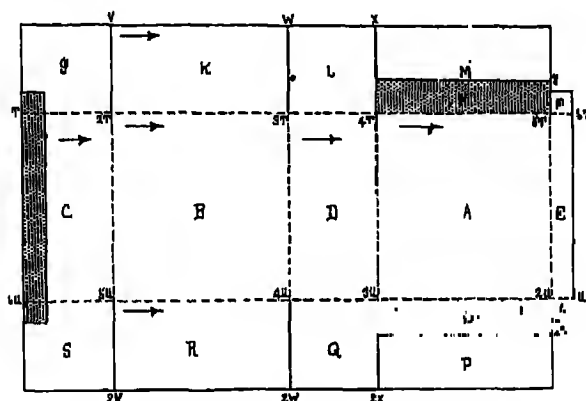


FIG. 85.—SINGLE-PIECE PACKET FOR SALE OF FLAKED WHOLE WHEAT FOOD.

portions arrowed in the drawing, the direction of the print being in each case the direction of the arrows.

Another interesting single-piece example is sketched out in Fig. 86. In this model A is the lid top, and B is the main base of the box. The front is lettered C, while the lid flap is shown at E, and the back is lettered D. The lid sides are shown at M and N, while the main base sides are denoted by H and I. Both these are slitted twice as shown at SS, SS, SS, SS. The front and back are extended in both directions by round-nosed flaps, shown at F and G in the case of C, and K and L in the case of D. The points of these fit into the pairs of slits on H and I.

To secure the independent operation of all these parts, a number of cuts must be made. These are required along

the lines R_2P , $2S_3P$, and T_4P in the case of the left-hand side, while similar cuts are also made along the lines $4QU$, $3QV$, and $2QW$ in the case of the right-hand side. Bends

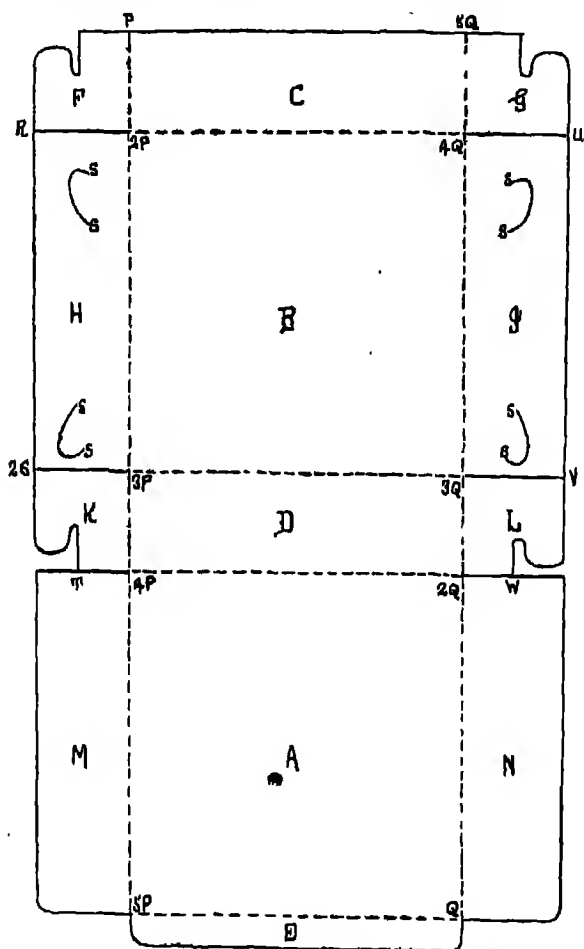


FIG. 86.—SINGLE-PIECE CONFECTIONERS' CAKE BOX.

amounting in each case to full right angles are then arranged for along the lines P_5P , and Q_5Q , as well as along the shorter lines $2P_4Q$, $3P_3Q$, $4P_2Q$, and $5PQ$.

With regard to putting this model together, the first

point to remember is that no adhesive of any kind is necessary. The four nosed flaps have their noses inserted in the slits, which completes the base or trough of this box, and after folding over along 4P2Q the strips M, N, and E are fitted inside the trough, and the model remains closed of its own accord, *i.e.*, without adhesive or string.

The dimensional data relating to this interesting folding example are as under :—

Total length and width, 8 ins. each, *i.e.*, A and B in this case form perfect squares ; depth, $2\frac{1}{4}$ ins. ; total weight

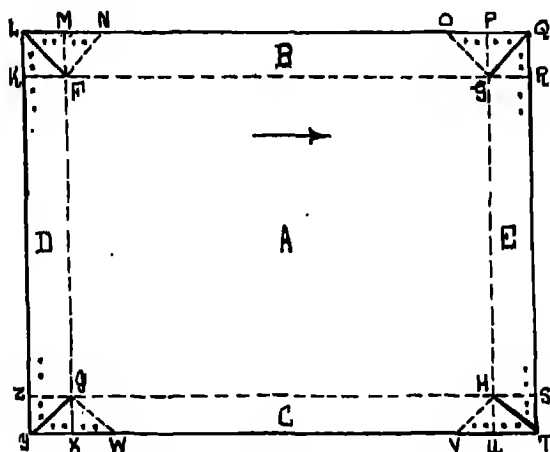


FIG. 87.—DRY-CLEANERS' DRESS AND COSTUME BOX (LID).

uncharged just over $1\frac{1}{4}$ ozs. Though this model may be demanded paper-covered on its entire outer surface, it is usually met with in an unprinted condition.

LARGE AND SMALL TWO-PIECE TYPES

Fig. 87 shows a small sketch of what is in reality one of the largest models we have so far had. Only the lid is drawn, as the trough portion is identical, except that it is a shade smaller and entirely without print.

In this example, as will be gathered, A is the main lid top, B and C being the back and front, and D and E the

two lid sides. In the first instance, however, a rectangle of the form LQTYL is cut out in the case of the lid, and a similar rectangle, but a shade smaller, as already noted, in the case of the base. Diagonal cuts are required in this instance, these being made along the lines LF, QG, TH, and YI. Right-angled bends are then arranged for along the lines KR, SZ, and also along the shorter lines MX and PU. Double right-angled bends, which are merely used for folding purposes while the boxes are in storage prior to use, are made along the short diagonal lines FN, GO, HV, and IW. Each corner is secured by a pair of wire stitches as indicated in the drawing.

With regard to dimensional details, the total length of this model is no less than 20 ins., its width is 15 ins., and its depth 2 ins. exactly. The total weight uncharged, taking both portions together, is 1 lb., and printing is usually demanded on the outer surface of the lid top A only, the direction being that of the arrow. It should be mentioned that as these large boxes are often preserved in the home, they form good advertising mediums, and it is surprising, therefore, that more use is not made of the inner surface for this purpose by dry cleaners and others.

Fig. 88 shows a shallow tailors' suit box which takes a couple of suits of the average man's size. This model is, I am informed, also made to take three suits and single suits. For the first it is a shade larger, and for the second it is considerably smaller. Only the trough is sketched out, as the lid is identical in all respects, except that it is a shade larger.

Taking the various parts, A is, of course, the main base of this tailors' box, B is the back, and C is the front, while D and E are the sides. The back is extended in both directions by small almost square flaps S and T, while the front is similarly extended by other flaps shown at V and U. To separate these, and to secure their independent operation, cuts are made along the lines KF, GN, HO, and RI.

Right-angled bends are next arranged for along the lines LQ and MP, and also along the lines FG and IH. Each

corner is held together by a pair of wire stitches as indicated, but the trough is not attached to the cover by this, or by any other means, being held merely by its own grip.

With regard to dimensional details, the total length is 22 ins., while the width is 15 ins. The depth, as in the former example, is 2 ins. exactly. The total weight uncharged is rather more than that of the previous example, this amounting, if we take the two portions together, to no less than 20 ozs. No portion of the outer or inner surface, either of the trough or cover, carries any print,

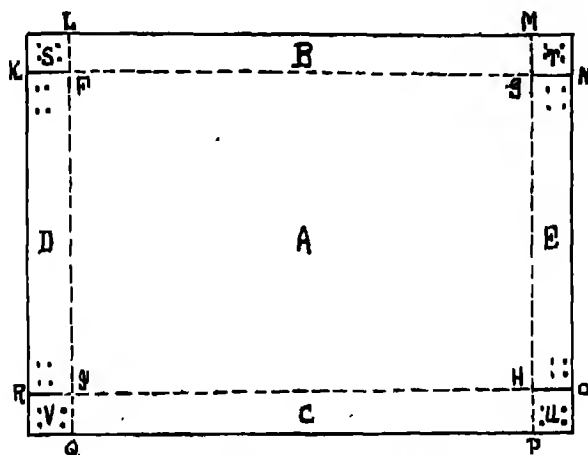


FIG. 88.—TAILORS' TWO-SUIT BOX (TROUGH).

although the entire outer surface is nearly always demanded paper-covered.

Fig. 89 shows another but very much smaller two-piece box, which is designed to prevent pilfering. Taking the cover first, it is manufactured from cardboard and from heavily gummed paper. Noting the various parts in the left-hand drawing, A is the main lid cover or top, B and C being the back and front, while D and L are the two sides. The outer surface of each of these is concealed by a strip of heavily gummed paper, which is extended in each case as shown by the shaded portions E and F. Right-angled bends are arranged for along the lines GH, HI, IK, and KG,

the corners of this being held together as a rule by external paper covering, which is not shown in the drawing.

With regard to the trough shown in the second sketch, the main trough base consists of the rectangle FGHI, and not merely of A, as might be expected. The back and front are shown at B and C, as before, while the two sides are shown at D and E. Right-angled bends are arranged for along the lines FG, GH, HI, and IF, and except for the rectangle within KLMN, the entire outer surface is paper-covered, this serving to hold the four corners together.

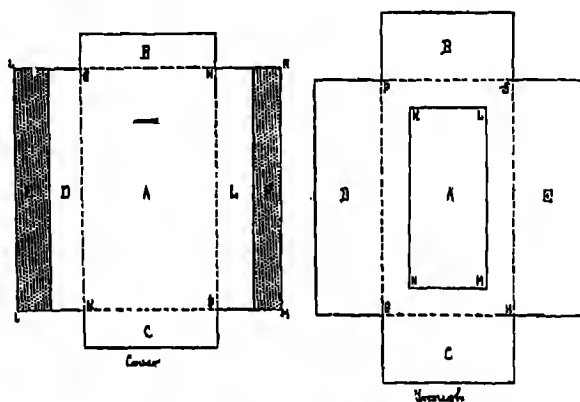


FIG. 89.—TWO-PIECE PILFERING PROOF PAPER CLIP BOX.

After charging this model, the shaded strips E and F of the cover are duly moistened, and adhere to D and E in the case of the trough. The outer margin LL of E in the cover then corresponds to the line FI of the trough, while similarly the outer margin MM of the cover corresponds to the line GH of the trough.

With regard to the dimensions, the total length is only 3 ins., the width being $1\frac{3}{4}$ ins., and the depth 1 in. exactly. The total weight uncharged, taking the two pieces together and including the anti-pilfering device, is just under $\frac{1}{2}$ oz.

AN EIGHT-PIECE PACKING

Fig. 90 shows what I think is one of the most interesting of all the examples we have had up to now. This eight-

piece model is simpler than it at first appears to be, and readers are asked to note carefully that the lid is made in three pieces, and that it is the trough of the box that is

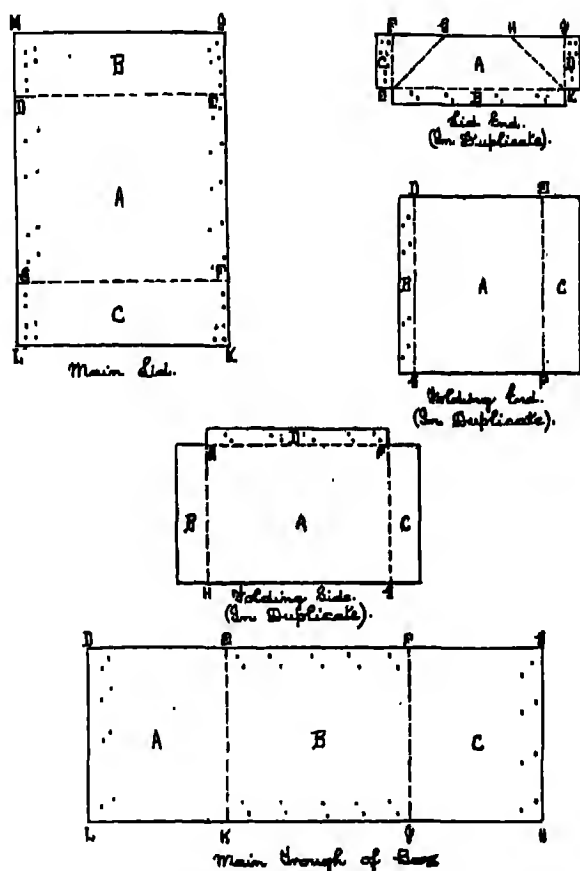


FIG. 90.—A USEFUL EIGHT-PIECE LADIES' HAT-BOX.

made of the other five. The lid is not attached to the box itself except by its own grip.

The main lid is first of all sketched out, and consists of a rectangle, as will be seen. The lid top is shown at A, and this is extended in both directions by sides shown at B and

C. Right-angled bends are arranged for along the lines DE and GF.

Two lid ends are then cut out, one of which only is shown in the drawing. Excluding for the moment the diagonals EG and HK, the main lid end consists of A, the lid end attachment flap being shown at B, and lid side attachment flaps being shown at C and D. Right-angled bends are arranged for along the lines FE, IK and EK ; double right-angled bends being used for packing only while the box is in storage prior to use, are made along the lines EG and HK. These lid ends are then attached to the main lid by quartets and triads of wire stitches, which are duly shown, so that the flaps C, B, and D of the lid end are on the inner surface of the main lid, and in such a way that the line FE of the lid end corresponds with the line IE of the main lid, while EK of the lid end corresponds with EF of the main lid, and KI again of the lid end corresponds with FK of the main lid, and similarly in the case of the lines HD, DG, and GL of the main lid. When this has been done, that portion of the box is complete.

The main trough of the box is next cut out, and this forms the rectangle DGHLD, the main base being indicated at B, and this being extended in both directions by trough ends A and C. Right-angled bends are arranged for along the lines EK and FI.

Two folding sides are next cut out, only one being shown in the drawing, and of this A is the main side, it being extended by a side attachment flap shown at D, and by a pair of loose side flaps shown at B and C. Right-angled bends are arranged for along the lines EF, FG, and HE. The strip D is attached to the main base B, so that its inner margin EF corresponds with the outer margin EF of the trough, or in the case of the duplicate side, with KI of the trough. This attachment is in each case carried out by means of a quintet of stout wire stitches.

We are now left with the folding ends, of which two are required, only one, however, being shown in the drawing. Of this, A is the main end, and this is extended to the left in this case by an end attachment flap B, and to the right

in this case by a loose flap C. A double right-angled bend is made along the line DG, and a single right-angled bend is made along the line EF.

This folding end is then attached, again by a quartet of wire stitches, to the main trough end A, or to C, in such a way that its inner margin DG corresponds to the outer margin DL of A, or GH of C. From this it will be evident that the main folding end A completely conceals the inner surface of the main trough end A, and similarly in the case of the other trough end C. The right-angled bend EF of the folding end then corresponds with the right-angled bend EK of the main trough, while in the case of the duplicate, the line EF of the folding end would correspond with the line FI of the trough. This makes the trough ends extremely strong, as they are, of course, double, and hence expensive hats can be sent long distances by post or by passenger train without being damaged before arrival.

With regard to dimensional details, the total length measured along EF of the trough is 12 ins., while the width measured along KE of the same portion is approximately $11\frac{1}{4}$ ins. The depth or height measured with the lid is 9 ins., while the total weight, taking all the eight portions together, *i.e.*, including all duplicates, is no less than 2 lbs. 3 ozs. This model will probably be demanded paper-covered both on its outer and inner surfaces, but it is not usually ordered in a printed condition, as the trade attaches to it its own large specially printed labels.

CHAPTER XVII

IN the present chapter I am covering a variety of different trades. It is a far cry, for instance, from the confectionery industry to the electrical trade, and again it is some distance from the ladies' blouse trade to the invalid jelly industry. Examples of this kind serve to show more and more how wide are the applications of paper boxes, boxboard containers, and cardboard cartons. It will not be long, in my opinion, before these materials are wholly substituted for expensive metal canisters, and most readers will greatly welcome the increased business that such a change must afford.

Whereas in previous chapters I have frequently drawn attention to boxes and packets of a very complicated character, in the present one simple models have been selected. These are obviously more suitable for the smaller box and packet works, as they can easily and rapidly be produced in long numbers.

TALL SINGLE-PIECE PACKET

Fig. 91 illustrates a tall single-piece packet in which sticks of peppermint or other rocks are sold by confectioners. This model has been introduced owing to the demand in the confectionery industry for a packet in which such sticks may be sold in pairs instead of individually. Taking the various parts, A is the front and B is the back, the sides being shown at D and E. A heavily gummed attachment flap is shown shaded at C, and this fits on to the back of the corresponding shaded portion of the opposite side, which again is lettered E. In other words, its inner margin depicted at S2B corresponds with the outer margin of E shown at WX.

The front is extended in an upward direction by a top I,

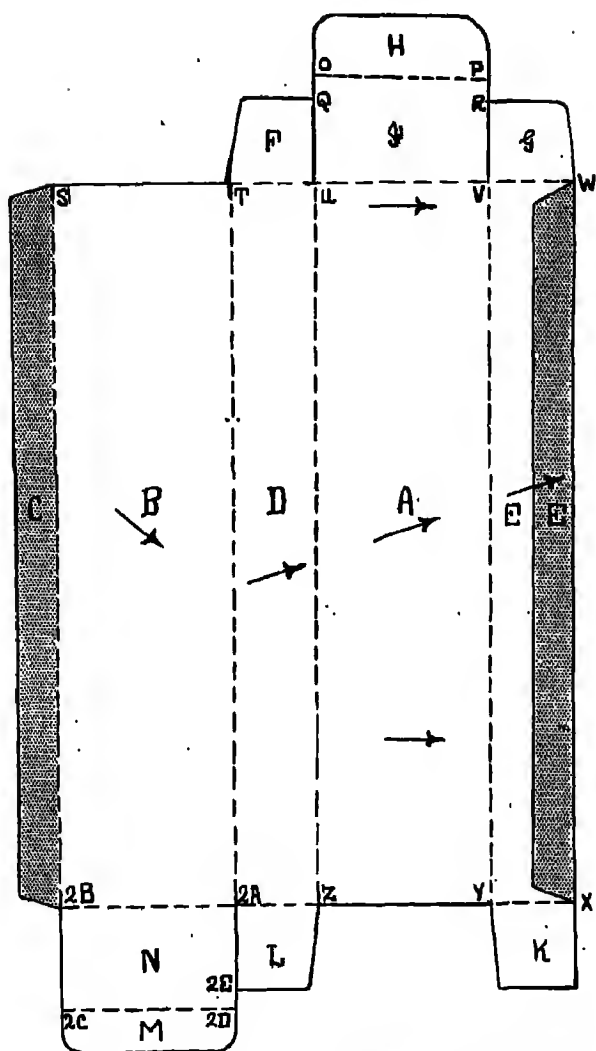


FIG. 91.—TALL TWO-STICK PEPPERMINT ROCK PACKET.

and a top flap H, while the back is extended in a downward direction by a base N, and a base flap M. The sides are extended in both directions by nearly square subsidiary flaps shown at F, G, K, and L, and to separate these from

the other portions, cuts are made along the lines QU, RV, 2A2E. Right-angled bends are then arranged for along the lines OP, TUVW, 2B2AZ, XY, and 2C2D. Longer bends of a similar character are also required along the lines S2B, T2A, UZ, and VY. The top flap and base flap carry no adhesive, but after folding in remain in by their own grip.

The following dimensional data apply to this increasingly popular model :—

Total height, $8\frac{1}{2}$ inches, measured along UZ ; width of side 1 inch, measured along YX ; width of front measured along YZ, 2 inches ; total weight uncharged, just over $\frac{1}{2}$ an ounce. This model is usually demanded paper-covered on its entire outer surface only, *i.e.*, not on the inner surface. Brightly coloured paper is greatly favoured, although the hue is very variable. Printing is demanded in several directions, as shown by the various arrows, and portions carrying no arrows carry no print.

INTERESTING TWO-PIECE PACKINGS

Fig. 92 shows an easily manufactured dual-piece blouse box. Taking the lid or cover first, A is the main top, B and C are the front and back, and D and E are the sides. Right-angled bends are arranged for along the lines FG, GH, HI, and IF. The corners are attached in the same manner as that explained below in the case of the trough.

The entire outer surface of the lid or cover is usually demanded paper-covered, either in cream-white paper, silvery-grey, or in a mixture of both. The inner paper margins extend in many cases more than half-way across the width of the sides, etc., but these are not shown in the diagram, as they are relatively unimportant.

With regard to the trough or box base sketched out separately, the construction of this is very similar to that of the lid or cover, except that the corner flaps are larger, and of a different shape. Taking the various parts, A is the main box base, B and C are the back and front, D and E again being the sides. Right-angled bends are required along the lines FG, GH, HI, and IF.

With regard to the corners, very stout but comparatively narrow flaps of heavily-gummed paper are attached to each extremity of the sides D and E as shown, right-angled bends then being made along the edges of the board as shown by the lines KF, LG, MH, and NI. The exposed

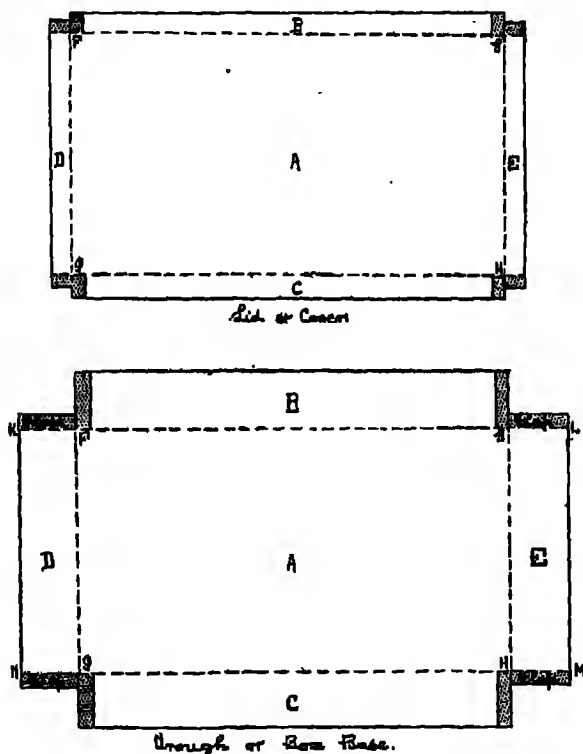


FIG. 92.—TWO-PIECE SHIRT BLOUSE BOX.

portion of the flap above KF then adheres to and conceals the shaded portion of the trough back shown to the left of B, while the corresponding shaded portion of the flap above GL adheres to and conceals the shaded portion of the trough back to the right of B. The concealed portions of the flaps on D and E are of similar width to the shaded portions on B and C.

Now, as to paper covering, the back, front, and two sides are usually covered on their entire outer surface with similar white or creamy-white paper to that indicated in the case of the lid or cover. The main base of the box itself, *i.e.*, that shown at A, is covered with much cheaper and thinner brown or buff paper on its outer surface. The inner margins of the paper come down the back, front and sides to about a quarter of their depth, but are not shown in the drawing, as again they are not of essential importance.

Dimensional data are given below :—

Total length, 15 inches ; total width, $8\frac{1}{2}$ inches ; depth of trough, 2 inches ; total weight uncharged, taking both portions together, $7\frac{1}{2}$ ounces.

Although occasionally printed examples are met with, box-makers would do well to supply this model in an unprinted state, so that blouse packers can attach thereto specially printed labels.

Turning now to Fig. 93, this shows an interesting two-piece box in which reels of flexible electrical cording are supplied. The lid or cover shown in the upper diagram will be described in detail only in the present instance.

The main lid top is shown at A, the back and front being shown at B and C, while D and E are the two sides. As will be noticed the back is extended to the left and to the right by small subsidiary flaps F and G, while the front is also extended in both these directions by similar flaps I and H. To separate these from the sides D and E, definite slits must be made, terminating at L and M in the case of D, and at 2L and 2M in the case of E. A portion of the front C is punched out with its extremities rounded as shown at O.

Right-angled bends are then arranged for along the lines KN, 2N2K, and also along the lines L2L and M2M. The flap F is attached to the side D by a pair of wire stitches shown both in it and in D, while the other three flaps are attached in exactly the same manner. Printing is as a rule demanded on the outer surface only in the direction of the various arrows. Portions carrying no arrows carry no print.

With regard to the trough or base, the above description

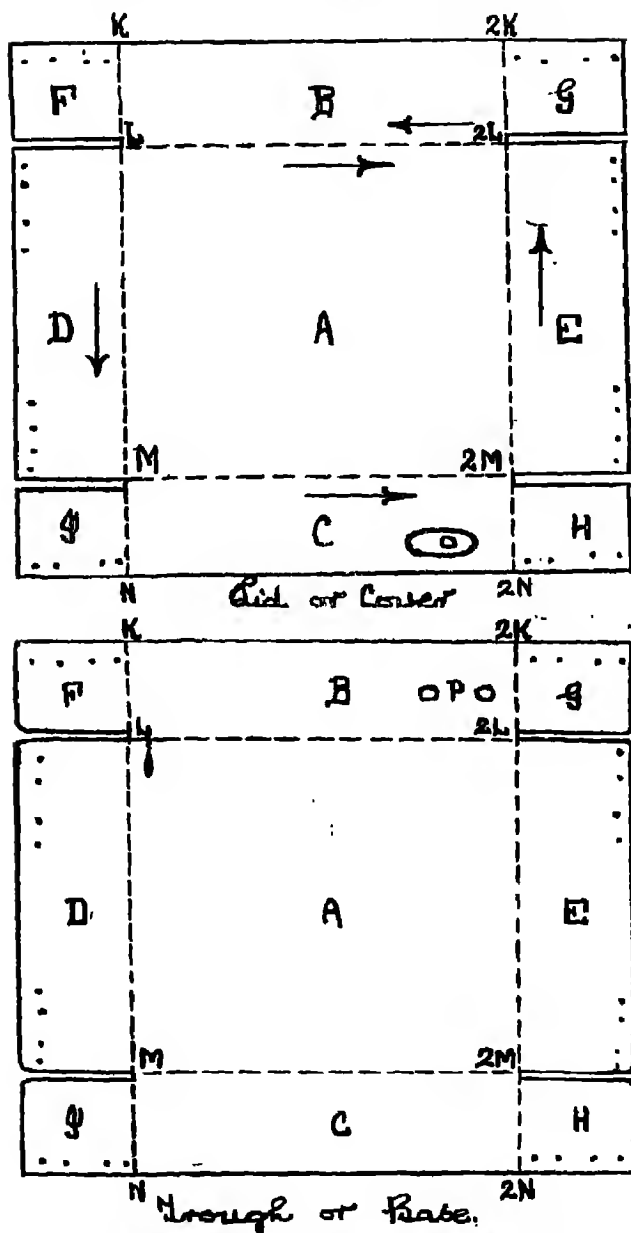


FIG. 93.—TWO-PIECE BOX FOR FLEXIBLE ELECTRICAL COTTON CORDS.

applies in the main to it also, although obviously it is made a shade smaller. The two portions are not attached to each other by wire stitches or any other means except by their own grip until charged.

A small point of difference between these two portions is that instead of the front C being punched out as shown at O in the case of the lid or cover, the back B has a pair of holes punched in it as shown at P. Those box-makers who have prepared other types of packets for the electrical industry will obviously appreciate the purpose of these holes. Wire stitching of the corners is carried out in exactly the same way, but box-makers should specially note that the trough or base carries no print as a rule, either on its outer surface or inner surface, which is a pity, considering the very great value of this large area for advertising purposes.

With regard to dimensional details, the length and width are $7\frac{1}{2}$ inches each, *i.e.*, the top and base of this box form exact squares. The depth is 2 inches, while the total weight uncharged, taking both portions together, is $4\frac{3}{4}$ ounces only.

Fig. 94 shows a very strong two-piece box of an exceedingly simple type, and yet one which up to now has not been commented upon in this series. Taking the inner strip first, A is the lid flap, B is the lid, C is the inner box back, D is the base, and E is the inner box front, its short length being compensated after folding by the addition of the lid flap A.

The outer cover, sketched out below, is, as will be seen, rectangular in character, and of this K is the main box back, L being one side and N the other, M being the main box front, and O the attachment flap, which is wire-stitched on to K, a trio of wire stitches being employed as shown, so that its inner margin indicated at SS corresponds with the outer margin of K shown at TT.

Right-angled bends are arranged for in the case of the above-described inner strip along the lines FF, GG, HH, and II, while similar bends are required in the case of the cover, along the lines PP, QQ, RR and SS. The portion E of the inner strip is then wire-stitched on to M of the outer

cover, while the portion C of the inner strip is similarly wire-stitched on to K of the outer cover. After folding over the top B and the top flap A, a very strong box results.

With regard to dimensions, the total height is 7 inches exactly; the width of the back is 3 inches, and the width of the sides is $3\frac{1}{4}$ inches each, hence the top and base do not form perfect squares. The total weight uncharged is just over 3 ounces, taking both pieces together, and no printing is usually demanded on any portion of the outer

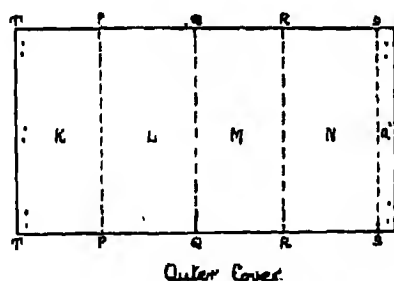
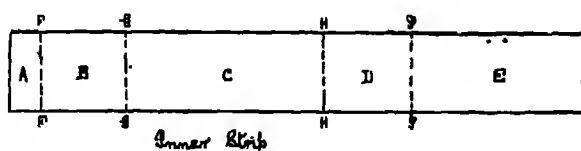


FIG. 94.—TWO-PIECE POSTAL CARTON FOR JARS OF INVALID JELLY.

or inner surface of this model. Box-makers should specially note that the present example is generally preferred if it is manufactured in corrugated cardboard.

Fig. 95 shows a very large dual-piece outfitters' box in which gentlemen's overcoats are sold. Taking the cover first, A is the main lid top, B and C are the back and front, and D and E are the lid sides. Diagonal slits are made along the lines FS, GT, HU, and IV, while right-angled bends are arranged for along the lines KN, RO, LQ and MP. The triangular corner-pieces, viz., FSL, FKS, MGT, NGT, UOH, UPH, VQI, and VRI, are attached to the side, front, or back, as the case may be, by pairs of wire stitches as shown.

Turning now to the trough, A is the main trough base, B is its back and C is its front, while D and E are its two

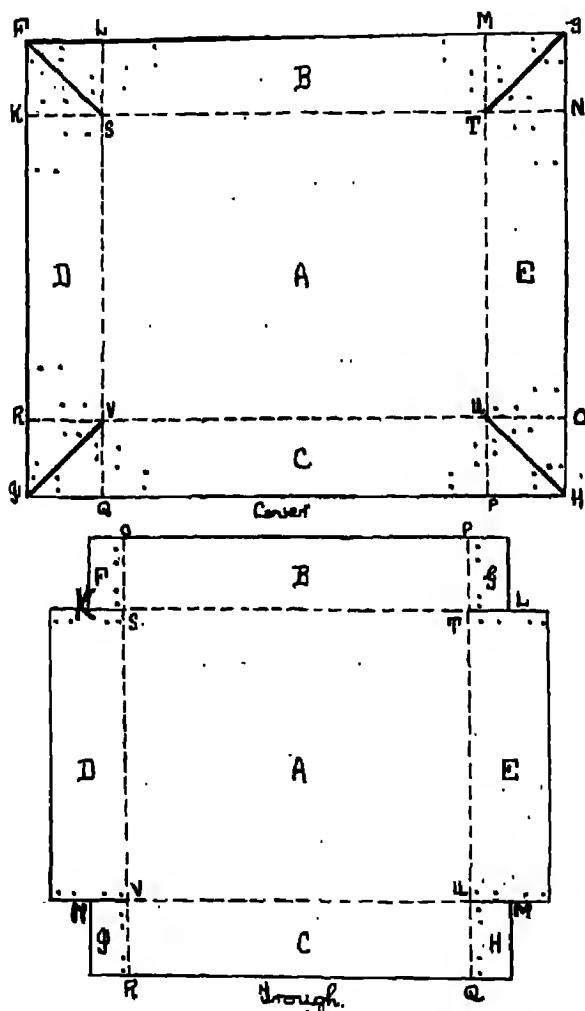


FIG. 95.—TWO-PIECE OUTFITTERS' OVERCOAT BOX.

sides. The back is extended in both directions by small subsidiary rectangular flaps shown at F and G, while the front is extended in the same manner by a pair of other

flaps H and I. Cuts are made along the lines KS, TL, UM, and VN to liberate these flaps from the sides D and E, and after this has been done, right-angled bends are arranged for along the lines ST, and UV, as well as along the lines OR and PQ. The flap F is wire-stitched on to the back of D, while the flap I is similarly attached. In exactly the same manner the flaps G and H are wire-stitched on to the back of E. The trough is a shade smaller than the cover, comparing its base A with the cover top A, but is not attached thereto by any other means except its own grip.

With regard to dimensions, the total length is no less than 19 inches, the width being a little less, viz., 15 inches. The depth is 3 inches, while the total weight of the two portions together is 21 ounces. This model, although the two portions afford a large area for advertising material, carries no print on its outer or inner surfaces as a rule.

A MUCH-USED FOUR-PIECE EXAMPLE

Fig. 96 depicts a four-piece box which is greatly in demand for packing different kinds of drapery goods. Taking the lid or cover first, this is of a simple type, and somewhat similar examples have been commented upon and illustrated in this book before. The lid top is shown at A, B and C being the back and front respectively, while D and E are the two sides of the lid. The front and back are extended in two directions, viz., to the left and to the right, by a quartet of almost square flaps shown at F, G, H, and I. To separate these cuts are made along the lines KS, LT, MU, and NV. Right-angled bends are then arranged for along the lines ST and VU, while similar bends are necessary along the lines OR and PQ. The flap F is attached to D by a pair of wire stitches shown in position on it and on D, while the other three corner flaps are attached in exactly the same manner.

Two trough ends must now be cut out, one of these being shown in the sketch. In this H is the main end, G and I being a pair of extension flaps, by which the end itself is attached to the sides of the box. The end is also provided

with a base flap shown at F, in order to attach it to the main box base. Right-angled bends are arranged for along the lines KK, KL, and LzL.

The main trough of the box is also sketched out, and, as will be seen, this takes the form of a moderate-sized rectangle. The main box base is obviously A, while the two sides, or, if we prefer it, the front and back, are shown at B and C.

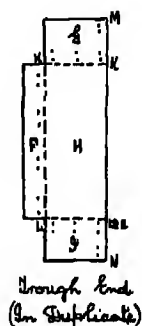
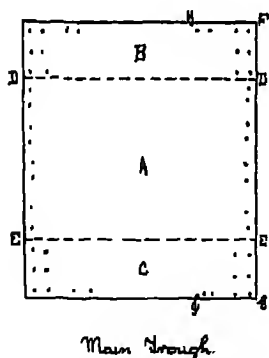
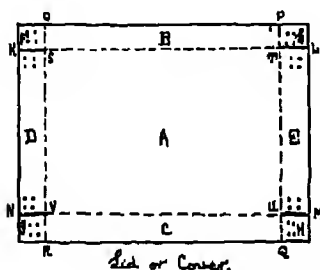


FIG. 96.—FOUR-PIECE BOX FOR PACKING DRAPERY GOODS.

Right-angled bends are arranged for along the lines DD and EE.

The trough ends are easily attached to the main trough by means of wire stitching. Thus in the example before us the strip F of the trough end is wire-stitched on to A, so that its inner margin KL corresponds with the outer margin of the main trough DE. The flap G of the trough

end is punched through in four places, or, more correctly, in four pairs of places, and its wire stitches then attach it to B of the main trough, so that its outer margin MK corresponds with FH of the main trough, and its bend KK corresponds with FD of the trough. In the same manner L₂L corresponds with EG of the main trough, and 2LN corresponds with GI of the trough, the other end being manipulated in the same manner.

With regard to dimensions, the total length is 16 inches, while the width is 11 inches, and the depth is 4 inches exactly. The total weight uncharged, taking all four portions, is 13 ounces, and although paper covering may be demanded on the entire outer surface of each portion, this box is not as a rule ordered in an actually printed condition.

CHAPTER XVIII

ALTHOUGH most boxes and packets are made with some or all of their outer surfaces in the form of a rectangle, it will be interesting in the present chapter to describe and illustrate one which does not conform with that specification and which has its four main outer surfaces in the form of triangles and which also differs from the usual models in another respect, namely, that some of its angles are not right angles.

There is a growing tendency in some parts of the world, especially in America, to depart from the usual somewhat uninteresting models, and to use packets of striking shapes for holding even the cheapest forms of merchandise, as it is claimed, and rightly too, that a novel form of packet makes such goods easier to sell.

In a great many instances irregular shaped packets are not more costly to prepare than some of the more complicated regular single-piece examples. Machines have, however, to be adjusted with great nicety, as a small difference of shape in the case of an example like Fig. 102 in this chapter spoils the appearance of the packet, and makes it much more difficult to put together.

A FOUR-PIECE BALL BOX

First of all let us take a four-piece example in which children's rubber balls are sold. This is sketched out in Fig. 97, only three of its pieces being illustrated, as the end is, of course, in duplicate.

Taking the various parts, and considering the lid or cover first, A is the main lid top, D is the lid front, and E is its back, while B and C are its sides. Right-angled bends are arranged for along the lines KL, MN, HM, and IN.

The front D is extended to the left and to the right by a pair of almost square subsidiary flaps F and G. These

are separated from B and C by definite cuts, terminating at K in one case and at L in the other. The flaps F and G are wire-stitched on to B and C, as shown by the dots in the diagram, while the back E is wire-stitched on to the main box, so that its inner margin MN corresponds with the line 5Z6Z.

Taking the ends next, one of which is sketched out below

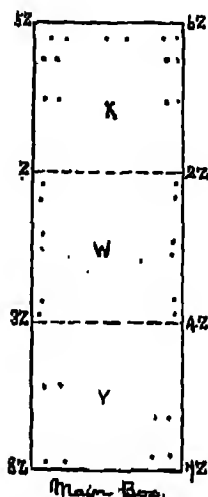
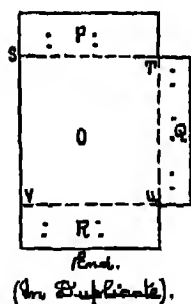
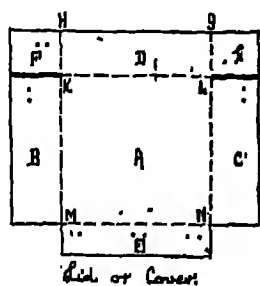
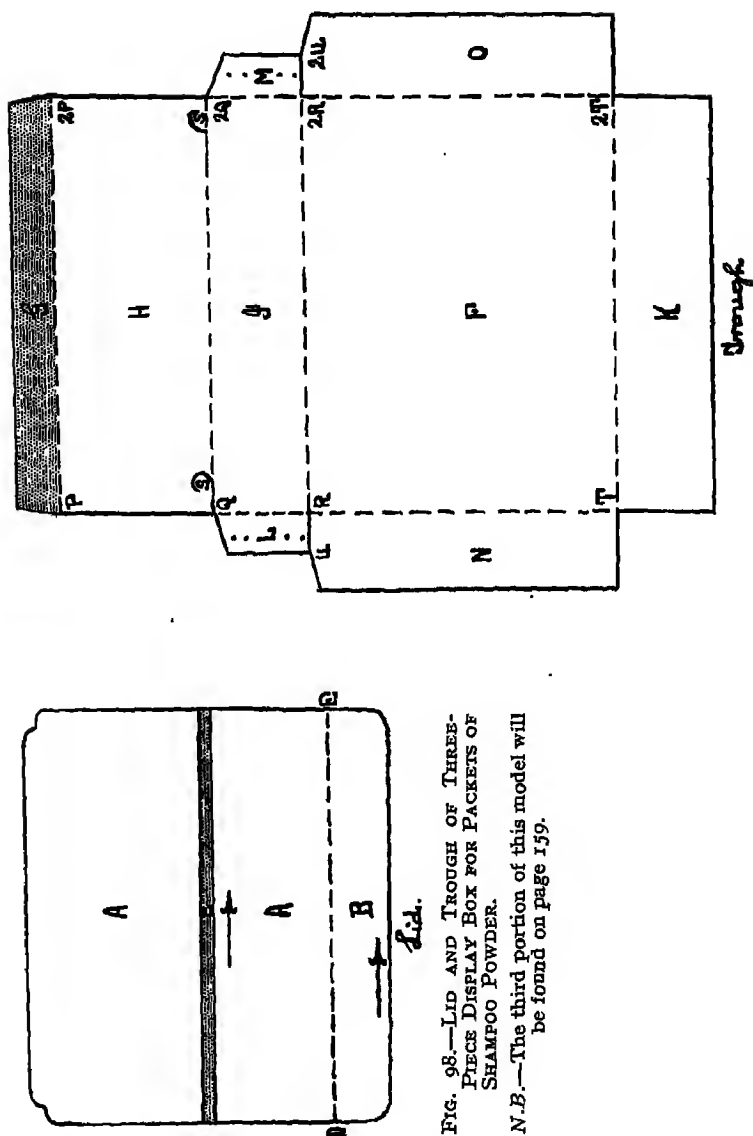


FIG. 97.—FOUR-PIECE BOX FOR CHILDREN'S RUBBER BALLS.

the lid or cover, O is obviously the main end, while P and R are two end flaps enabling it to be wire-stitched, as shown by the pairs of dots on each portion, to the two sides, which will be dealt with directly. Each end has a base flap shown at Q, and this is wire-stitched on to the main base of the box, so that its inner margin TU corresponds either with the line Z3Z or correspondingly with the line 2Z4Z.



Now, with regard to the main box, which is sketched out to the right, the base is shown at W, and the two sides are

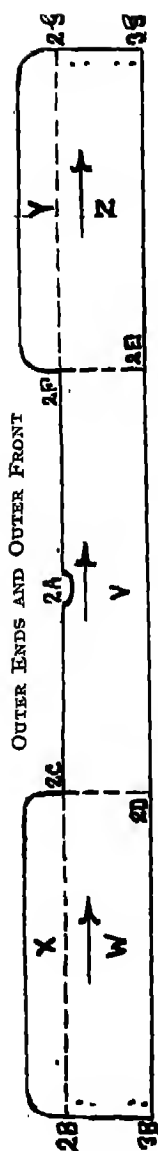


FIG. 98.—THREE-PIECE DISPLAY BOX FOR PACKETS OF SHAMPOO POWDER.

indicated at X and Y. Right-angled bends are arranged for along the lines Z₂Z and 3Z₄Z, similar bends being arranged for in the case of the ends along the lines shown at ST, TU, and UV.

In putting this model together, after wire-stitching the lid on in the manner already indicated, the line ST of the end corresponds to the line 6Z₂Z of the main box, while the line VU corresponds with the line 7Z₄Z of the main box. If the end is wire-stitched on to the left-hand side in a similar manner, the line ST would correspond with the line 5ZZ, while the line VU would correspond with the line 3Z₈Z.

The following dimensional data relate to this inexpensive and important model:—

Length, 5 inches; width, 5 inches; depth, 5 inches, *i.e.*, the box when put together makes a cube; total weight, uncharged, taking all four pieces together, 3½ ounces.

In regard to finishing this model, it is not supplied paper-covered as a rule on its outer surface, although its inner surface may be so concealed by means of cheap white material. Little if any print is demanded on any portion of it, while no part carries any adhesive, sole reliance being placed upon stout wire stitches.

A THREE-PIECE SHAMPOO PACKET

Fig. 98 illustrates one of the many types of display boxes in which shampoo powders are sold to the public. This outer box is large enough to hold half-a-dozen packets, and its novel nature enables it to be used for advertising and display purposes in shop windows.

Taking the lid first, this consists essentially of a thin plate with two of its corners rounded and the other two

cut out in the curious shape indicated. The main lid is shown at AA and the lid flap at B. The strip C carries adhesive and is sometimes much wider than that indicated in the drawing. A right-angled bend is arranged for along the line DE, but in using this example for display purposes the angle becomes an obtuse one.

Taking the trough portion, F is the main trough base, G and H are two portions of the trough lid, I is the trough back, and K is a portion of the trough front. The trough ends are sketched out at N and O, or perhaps one had better say the inner ends, while the back I is extended in both directions by small irregular shaped flaps L and M.

In order to liberate the various portions, cuts must be made along the lines UR and 2R₂U, while semicircular cuts are made at S and S in H. Right-angled bends are then arranged for along the lines Q₂Q, R₂R, T₂T, QRT, and 2T₂R₂Q. A bend, which is not, however, active until the box is used for display purposes, must also be arranged for along the line P₂P. This, however, is not a right-angled bend, and the number of degrees can be varied at will.

In regard to the outer ends and outer front, V is the main outer front, and W and Z are the outer ends respectively. These are extended in an upward direction by a pair of end flaps shown at X and Y, a thumbhole being cut out of V, as indicated at 2A, in order to enable the box to be opened with facility. Right-angled bends are then arranged for along the lines 2B₂C, 2G₂F, and 2C₂D, as well as along the line 2F₂E.

In putting this box together, the flaps L and M of I of the trough are wire-stitched on to W and Z, or, conversely, the extremities of these portions are wire-stitched on to them, so that the lines QR and 2Q₂R correspond with the lines 2B₃B and 2G₃G.

A special note is required in this case in regard to the use of adhesive. The whole of the shaded portion G of the trough may be covered with good glue or similar material, and in many instances this is found to be the case. In other examples, however, quite a narrow strip of adhesive

is carried on G, this corresponding with the narrow shaded strip C of the lid itself. The lid is then attached to the upper or outer surface of G, *via* the strip C, and the line P₂P then forms a hinge. The broken corners of A fit into the slits S, S, of the trough, but are released from them when the outer is to be used for display purposes, otherwise the hinge above referred to would not operate.

In regard to dimensional data, the length of this model is $5\frac{1}{4}$ inches, its width being 4 inches exactly, and its depth $1\frac{1}{4}$ inches. The total weight, uncharged, taking all three pieces together, is just under $1\frac{1}{4}$ ounces.

Regarding the finishing of the model, a paper covering on the entire outer surface of all portions is generally demanded. Printing may be ordered on the outer or exposed surfaces of AA and B of the lid, and also on the outer surfaces of W, V, Z, which form the front and ends. The trough itself carries no print of any kind either on its outer or inner surface.

SMALL SINGLE-PIECE PACKETS

Fig. 99 shows a much-used electrical accessory packet made in a single piece. Taking the various parts, A is the top and B is the base, D is the front, and E and F are the back. The right-hand end is shown at G, which is extended by an end flap H, while the left-hand end is shown at M, and this is similarly extended by an end flap L. The front and back are extended in both directions, *i.e.*, to the right and to the left, by small flaps, one corner of each of which only is rounded off as indicated, the lettering being I, K, N, and O. The shaded strip C is an attachment flap, which is heavily covered with adhesive, and then attached to the back, so that it wholly and completely conceals the portion F.

To secure the independent operation of all these parts, cuts are required, and these are made along the lines XR, YS, and 2QW. A number of right-angled bends are necessary, *i.e.*, both short and long ones. They are made along the lines QRST, U₂U, 2P₂R, V₂V, 2T₂S, P₂P, Q₂Q, R₂R, and S₂S.

Regarding dimensiona ldata, the length and width are

$2\frac{1}{4}$ inches each, *i.e.*, the top and base of this packet form perfect squares. The depth is $1\frac{1}{2}$ inches, while the total weight, uncharged, is slightly over $\frac{1}{4}$ of an ounce.

In regard to finishing, this model is not supplied paper-covered either on its outer or inner surface as a rule. Much printing is, however, demanded instead, and all the portions

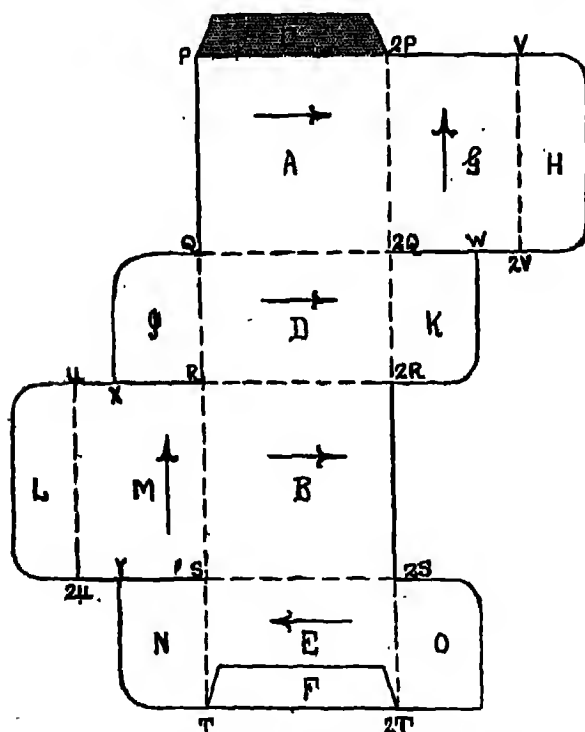


FIG. 99.—SINGLE-PIECE ELECTRICAL ACCESSORY EXAMPLE.

arrowed may be completely covered therewith on their outer surface, although the inner surface is almost always bare of print.

Another interesting single-piece example is sketched out in Fig. 100. In this packet, A is the front and B is the back of the box, D being its top and C the top flap, while E is the main base. The sides of this interesting example

are shown at G2G, K2K, H2H, and L2L. The upper and outer pair of sides is extended in an upward direction by

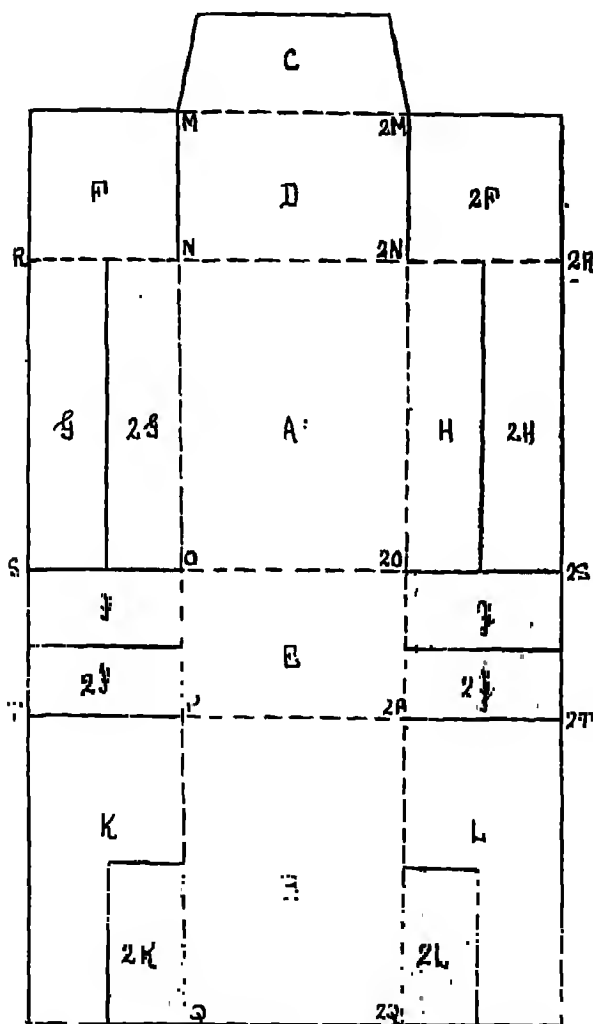


FIG. 100.—SINGLE-PIECE BLANC-MANGE POWDER PACKET.

two almost square flaps shown at F, 2F, while the base E is extended to the left and to the right by a pair of similar

shaped flaps shown, however, in two portions each at I₂I, and J₂J.

Cuts must be arranged for along the lines MN, SO, TP, 2T₂P, 2S₂O, and 2M₂N, these freeing all the various portions, and enabling them to operate independently.

Right-angled bends are then arranged for along the lines M₂M, N₂N, O₂O, P₂P, NOPQ, 2Q₂P₂O₂N, RN, and 2R₂N. Adhesive is required on the shaded portions 2I, 2K, 2J, and 2L, and after folding it will be found that 2I and 2K are concealed by 2G, and that 2J and 2L are concealed by H, in other words the line PQ corresponds with the line RS, and the line 2Q₂P corresponds with the line 2R₂S.

With regard to dimensional data, the width of the front is $1\frac{1}{2}$ inches, the width of the side is 1 inch, and the depth or height is 2 inches. The total weight, uncharged, is well under $\frac{1}{4}$ of an ounce. No printing or paper covering is demanded, as the model is wrapped and sealed after charging in specially printed papers by the users. Cream or creamy-white card is much favoured, instead of the commoner types of brown or yellow material.

LARGE SINGLE-PIECE SALT AND OATS PACKETS

Fig. 101 depicts an interesting single-piece packet in which oats for porridge making are sold to the public. Taking the various parts, A is the front and B is the back, C₂C being one side and D the other, while E is the attachment or junction flap, which, after being heavily covered with adhesive, is attached so that its outer surface conceals the shaded portion 2C.

A pair of quartettes of flaps form the top and ends, or, more accurately, the top and base respectively, these being lettered F, G, H, and I, and J, K, LM, and N respectively. It will be noticed that the exposed corners of the four larger ones G, I, K, and N, are rounded off, but that the exposed corners of F and J are not so rounded.

In order to free the various parts, cuts are made along the lines TP, UQ, and VR in the case of the top, and 2P₂T, 2Q₂U, and 2R₂V in the case of the base. Right-angled

bends are then arranged for along the long lines OPQRS and $2S_2R_2Q_2P_2O$, while rather shorter but otherwise similar bends are also necessary, and are, therefore, arranged for along the lines P_2P , Q_2Q , R_2R , and S_2S .

In order to make the use of adhesive in this model as clear as possible, those portions of the base which carry it are shaded, *i.e.*, K, L, and M. Similar portions of the top are also covered with adhesive, but bearing in mind the popularity of flat models, box-makers may not be asked to

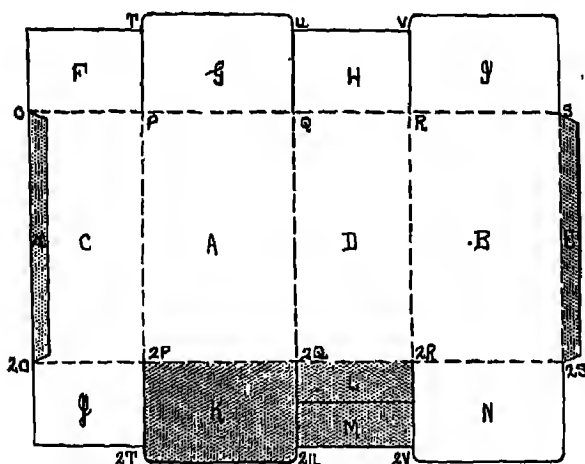


FIG. 101.—SINGLE-PIECE TWO-POUND GROCERS' OATS PACKET.

use glue on any portion, this being employed by the oats packers after charging, or during the operation of such.

With regard to dimensional details, the width of the front is $4\frac{1}{2}$ inches, while the width of the side is $3\frac{1}{2}$ inches, so that the top and base form rectangles instead of squares. The depth or height is 8 inches exactly, while the weight, uncharged, is just over $2\frac{1}{2}$ ounces.

In regard to finishing, I would point out that the inner surface may be ordered paper-covered, cream or white material being favoured; but the outer surface, although this is paper-covered also, need not trouble box-makers greatly, as oats packers will generally prefer to use their own specially printed sheeting, which is not attached until

after the packet has been charged, and which effectually seals it at both ends.

Fig. 102 shows what I think is one of the most interesting models that we have so far had. Each of its four sides is in the form of a triangle, and from this it follows that all its angles will not be right angles.

Taking the various parts, A is usually regarded as being the front of this example, and B the back, C and D being the left-hand and right-hand sides, while E is the attachment flap, which, after glueing, is affixed to the back of B

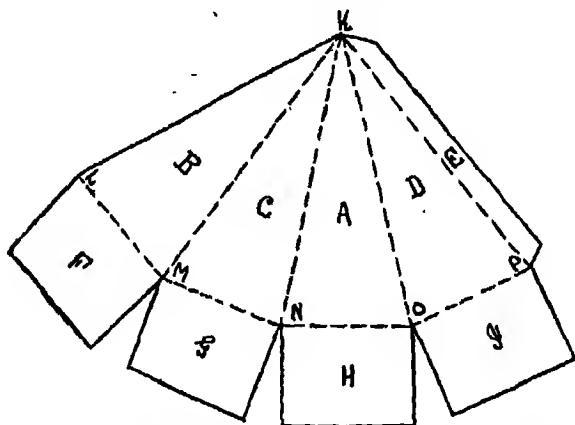


FIG. 102.—SINGLE-PIECE TRIANGULAR POINTED TABLE SALT PACKET.

so that its inner margin KP corresponds with the outer margin of that portion shown at KL.

The base is made up of four portions, shown at F, G, H, and I, and it should be carefully noted that these do not form perfect rectangles.

As this is a four-sided model, there being, however, five-sided ones on the market, it follows that the bends along the lines KM, KN, KO, and KP will be full right angles, but the bends which are necessary along LM, MN, NO, and OP, owing to the pyramidal form of the packet, are considerably less than full right angles. Some adhesive is generally used on all four base portions, but it is, of course,

essential to have it on F and H, the latter forming the extreme outer base and the first forming the next to outer base.

In regard to dimensional details, the length of the base is $3\frac{1}{4}$ inches, and the width of the base is the same, and from this it follows that the portion F is not wholly concealed by the portion H, as neither of these forms a square in the drawing. The depth or height measured from the apex K to N is $7\frac{1}{2}$ inches, the vertical height from point to base being approximately 7 inches, and the weight, uncharged, is just under $\frac{3}{4}$ of an ounce.

In regard to finishing, paper covering may be demanded on the entire outer and inner surfaces, in spite of the fact that the salt is itself packed in a paper bag. Printing is usually ordered on the outer surface of B, C, A, D, and H, and on the narrow exposed strip of F.

CHAPTER XIX

It has been said quite rightly that there are very few trades in which the size of the article manufactured varies between such wide limits as is the case in the box-making industry. This is certainly borne out by the half-dozen illustrations given in the present chapter, the maximum length of the first being, for instance, $2\frac{1}{4}$ inches only when made up, while the maximum length of the fifth is, as will be seen, no less than 22 inches. With such extremes it will be evident that a remark made in a previous chapter, to the effect that machines can as a rule be adjusted, does not invariably apply, as it would obviously be too much to expect a machine designed to make the tiny custard powder model to serve also for the manufacture of extra large tailoring types, even if the design was identical. We do, however, find that there is size range up to a considerable extent, and models two or three times the size of Fig. 103 can as a rule be manufactured without installing new machines, though when the dimensions are multiplied by ten this is quite impossible.

In the cases cited, of course, the design differs very greatly, as well as the size. There is a growing tendency, however, to expect machines to do more than they reasonably can, and however cleverly a machine may be made it is altogether too much to expect to produce from it two such entirely different boxes as the first and fifth.

SMALL AND MEDIUM SINGLE-PIECE MODELS

Fig. 103 illustrates a much-used single-piece packet in which popular custard powders are sold. Taking the various parts, and considering this as a flat instead of an upright model, A is the top and B is the bottom, G is the front, H is the back, and I is the back flap. The inner sides are shown at E, 2E, and 2F, F, 2E and 2F only carrying

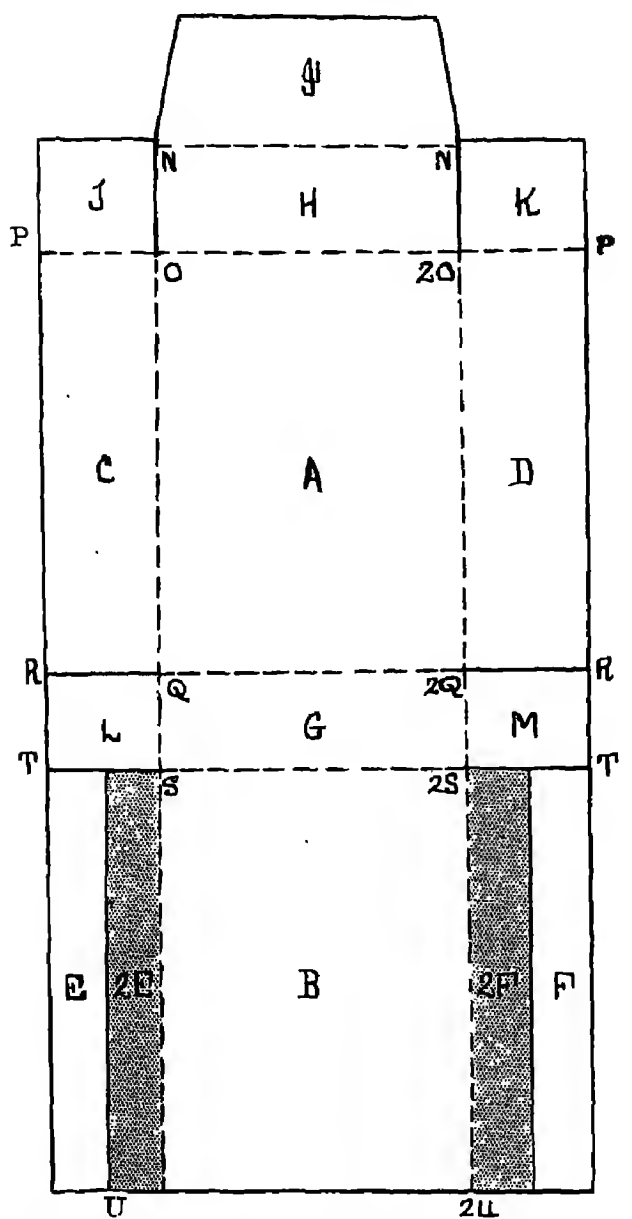


FIG. 103.—UNPRINTED CUSTARD POWDER PACKET.

adhesive. The outer sides are shown at D and C, and these are extended in an upward direction by small almost square flaps J and K. The front G is extended to the right and to the left by a pair of somewhat similar shaped flaps, L and M, and in order to free all the flaps and to secure their independent operation, cuts must be made along the lines NO, N₂O, TS, and 2ST, as well as along the lines RQ and 2QR.

Right-angled bends, which vary greatly in length, are made along the lines NN, PP, Q₂Q, S₂S, OU, and 2U₂O. After folding and gluing, the line SU corresponds with the line PR, in the case of the left-hand side, while the line 2S₂U corresponds with the line PR in the case of the right-hand side.

No printing of any kind is demanded on any surface, nor are box-makers required to supply this example paper-covered on its outer or inner surface. Custard powder packers themselves wrap it and seal it with their own printed sheets.

Regarding dimensional data, the length of this model is $2\frac{1}{2}$ inches, its width is $1\frac{1}{2}$ inches, and its depth is $\frac{1}{2}$ an inch only. The total weight uncharged is rather under $\frac{1}{4}$ of an ounce. Those who prefer to consider it as an upright model should note that its height is $2\frac{1}{2}$ inches, but in practice the model is always sold at rest, *i.e.*, as a flat example.

Fig. 104 shows a single-piece model much used by Swedish bread packers. Taking the various parts, and again considering this as a flat model, A is the top and B is the base, C the front, and D, 2E, the back, while E is the attachment flap, which after being heavily covered with adhesive, is attached to the back of 2E, and completely conceals this.

The outer ends are shown at H and I, the inner ends at F and G, and a quartette of end flaps are shown at J, K, L, and M. In order to free the various parts, cuts must be made along the lines PO, RQ, and TS, in the case of the left-hand side, and 2ST, 2QR, and 2OP, in the case of the right-hand side. Bends amounting to full right angles are then arranged for along the lines O₂O, Q₂Q, S₂S, U₂U, NU, and 2U₂N. In addition to adhesive being required on E, it is also required on F and G, or conversely on the under-side of H and I.

Printing may be demanded in many directions, *i.e.*, in a horizontal direction, in a downward direction, in an upward direction, and in no less than four angular directions, as shown by the various arrows. Those portions not carrying any arrow do not as a rule carry print, and printing is con-

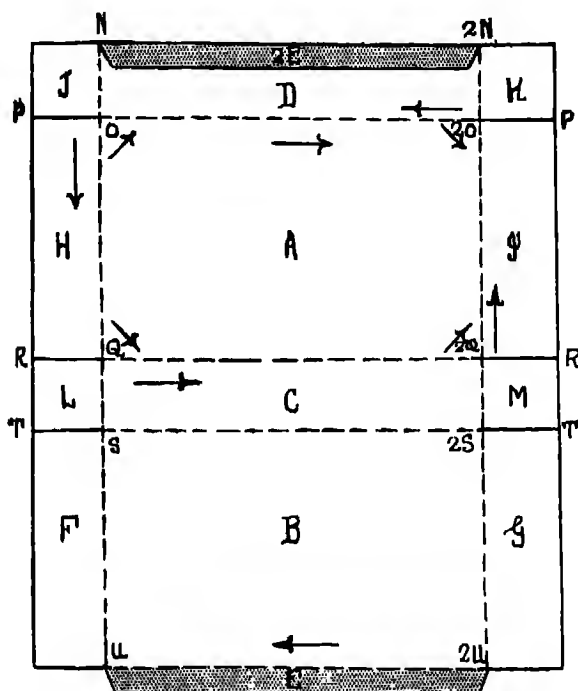


FIG. 104.—SINGLE-PIECE CARTON FOR SALE OF SWEDISH BREAD.

finer solely to the outer surface of this exceptionally interesting and useful example.

Regarding dimensional data, the total length of this model is 8 inches, while its width is $5\frac{1}{2}$ inches, and its depth $1\frac{1}{2}$ inches. The total weight uncharged, including an outer surface paper-covering, is $1\frac{1}{2}$ ounces.

LARGER SINGLE-PIECE FOLDING PACKINGS

Fig. 105 shows a very useful single-piece wire-stitched box employed by fruiterers for bunches of grapes, etc.

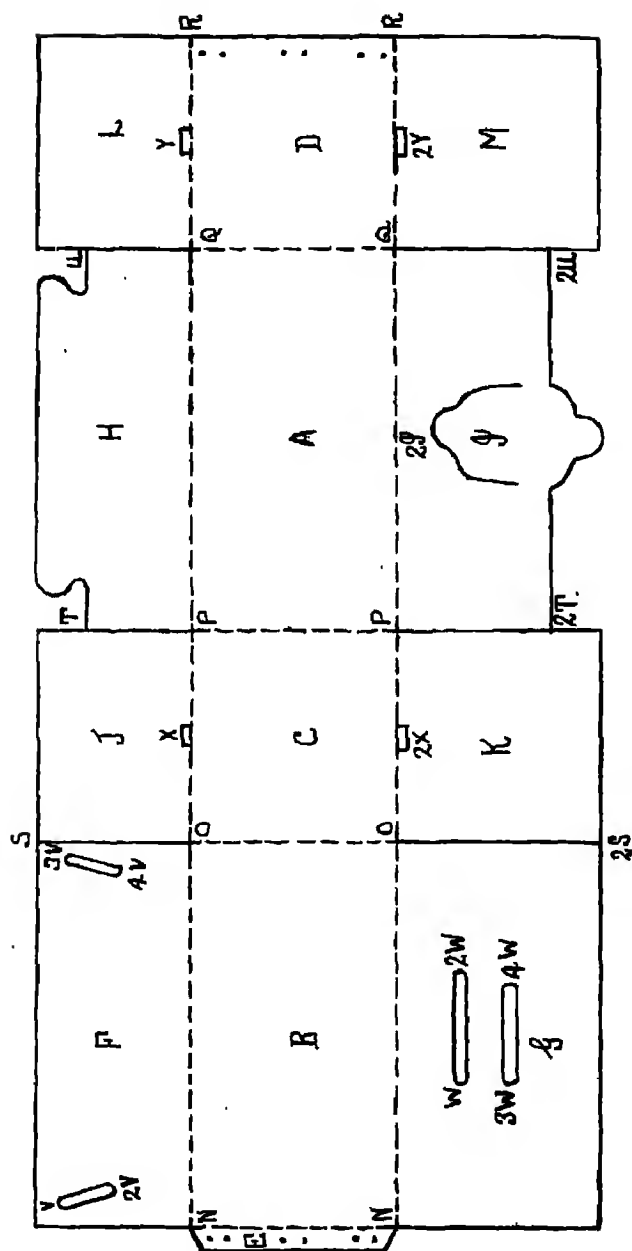


FIG. 105.—SINGLE-PIECE FRUITERS' FOLDING BOX FOR SALE OF BUNCH OF GRAPES.

Taking the various parts, A is the back and B is the front, C and D are the ends, J, K, L, and M being four end flaps, which serve to strengthen the top and base after folding. An attachment flap is provided at E, but no adhesive is used thereon, as by means of a trio of wire stitches it is attached to the back of D, so that its inner margin NN corresponds to the outer margin of that end shown at RR.

The main inner top is shown at F, while the main inner base is shown at G. The main outer top, however, is shown at H, while the main outer base is shown at 2I, I. In the case of H a pair of the usual rounded noses is provided, while in the case of 2I, I, a slit is made to form one nose, and the card is cut away to form another nose.

To secure the independent operation of all these flaps, slits must be made along the lines SO, TP, UQ, OzS, PzT, and QzU. For the reception of the nosed flaps definite slits are punched out as shown at V2V and 3V4V in F, and W2W, 3W4W in G. A quartette of small ribbon slits is provided, one in each of J, L, K, M, these being lettered respectively X, Y, zX, and zY.

Right-angled bends must be arranged for along the two long lines NR, RN, also along the shorter lines NN, OO, PP, and QQ.

In regard to finishing, an outer paper covering is generally demanded, but no printing either on the outer or inner surface as a rule.

As to dimensional data, the total length is 8 inches, the width $4\frac{1}{2}$ inches, the depth 4 inches, *i.e.*, the ends are not perfect squares, while the total weight uncharged, exclusive of ribbons and wire stitches, is $2\frac{1}{2}$ ounces.

Fig. 106 shows an interesting and very widely employed single-piece envelope box, requiring no glue or other adhesive.

Taking the various parts, E is the front, A is the top, C is the back, B is the base, and D is the inner front.

The top is extended in both directions by outer end flaps F and G, which do not form perfect rectangles, owing to the fact that one corner of each is rounded off. The base

is extended by two perfectly rectangular flaps H and I, which form the inner ends.

The outer front, the back, and the inner front are extended in each direction by irregular shaped nosed flaps, lettered J, L, N, and K, M, O. The shapes of these should be specially noted, as a small deviation will preclude the box being fitted together readily. In order to enable the example to be opened easily a thumb-hole V is provided in E, as shown.

Definite slits are made between F and L, and G and M,

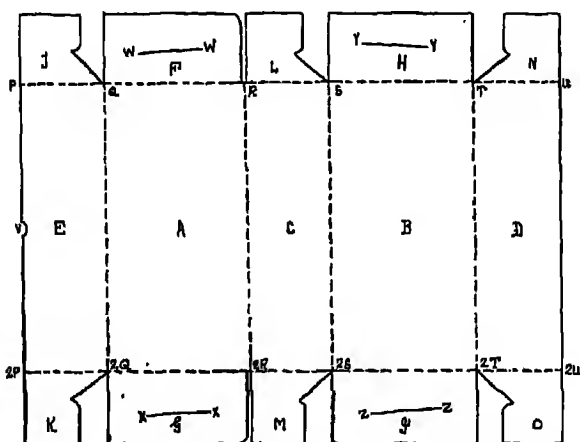


FIG. 106.—SINGLE-PIECE UNGLUED FOLDING MODEL FOR ENVELOPE MAKERS.

terminating at R in one case, and at 2R in the other, in order to secure the independent operation of these parts. Other slits for the reception of the noses of the irregular shaped flaps just mentioned are made at WW in F, YY in H, XX in G, and ZZ in I.

Right-angled bends are next arranged for, as will be expected, along the lines PU, 2P2U, or, considering them separately, along the lines PQ, QR, RS, ST, and TU, as well as along the lines 2U2T, 2T2S, 2S2R, 2R2Q, and 2Q2P. Other similar but short bends, comparing them with the first two very long ones above, are made along the lines Q2Q, R2R, S2S, and T2T. No printing or paper covering

either on the outer or inner surface is demanded, as envelope makers attach to one or both of the outer ends their own printed labels.

In regard to dimensional data, the total length of this example is 12 inches, the width is $5\frac{1}{4}$ inches, and the depth is $3\frac{1}{4}$ inches. The total weight uncharged is $4\frac{1}{4}$ ounces exactly.

TWO AND THREE-PIECE PACKING BOXES

Fig. 107 shows a very useful type of two-piece tailoring box, quite distinct from any of those already illustrated. Only the cover portion will be described in detail, as the trough portion is identical with it, except for the fact that it is a shade smaller, and that it carries no thumb-holes.

Taking the cover, therefore, sketched out in the top diagram, A is the main top, B is its back, C is its front, E is one end, and F is the other. The back is extended to the left by a nosed flap G, the right-hand end is extended in an upward direction by a similar nosed flap H, the front C is extended to the right by another similarly nosed flap I, while the left-hand end E is extended in a downward direction by a fourth similarly nosed flap K.

A quartette of angled cuts must next be made, these being much more substantial than mere slits. One is shown at VV on E, the second at UU on B, the third at XX on F, and the fourth and last at WW on C. Into these cuts the noses fit after bending, and the angled nature enables the nose to be inserted easily and removed with facility.

Right-angled bends are required along the lines N2U, SP, RO, and TQ. A pair of thumb-holes, shown at L and M on B and C, must be made to complete the model.

A paper covering of two different kinds is generally ordered on the outer and inner surfaces alike of the lid or cover and trough. Brown is favoured for the outer surface, while white is most often used for the inner. No printing of any kind on either of these surfaces is usually demanded.

In regard to dimensions, the total length is 22 inches, the width is 14 inches, and the depth 5 inches. The total

weight uncharged, taking both portions together, is 30 ounces.

Fig. 108 shows a three-piece box for the rubber-

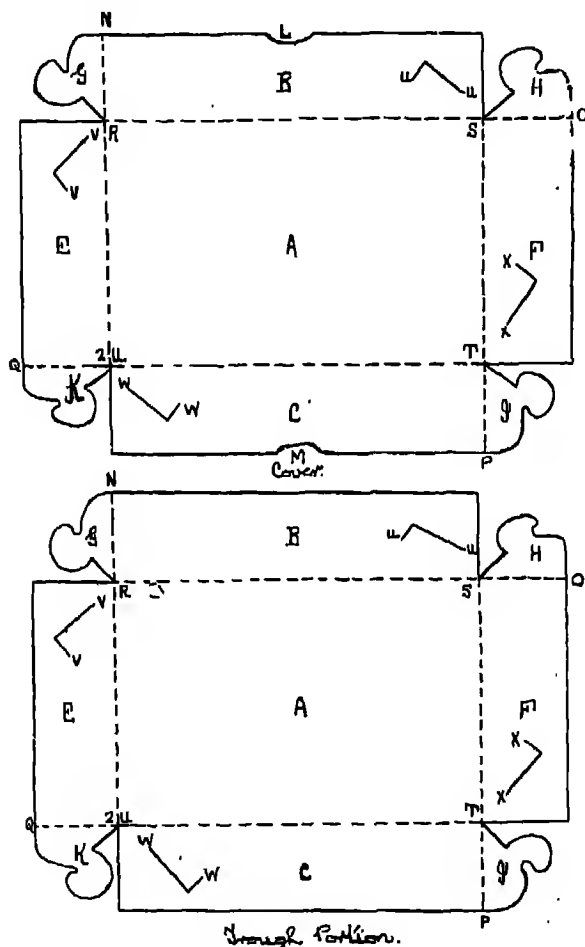


FIG. 107.—LARGE TWO-PIECE MERCHANT TAILORS' MODEL FOR SUITS.

ball industry, a single ball box having already been described.

Taking the lid first, which is in duplicate, *i.e.*, a similar

lid is fitted on to the base in order to strengthen the example for display purposes, we find that A is the main lid top, B is the back, C is the front, D is the left-hand side or end, and E is the right-hand side. Right-angled bends are made along the lines FF, FG, GG, and GF, the corners being wire-stitched together without the use of adhesive paper slips, as shown by the pairs of dots at each extremity.

Turning now to the trough portion, A is the main trough

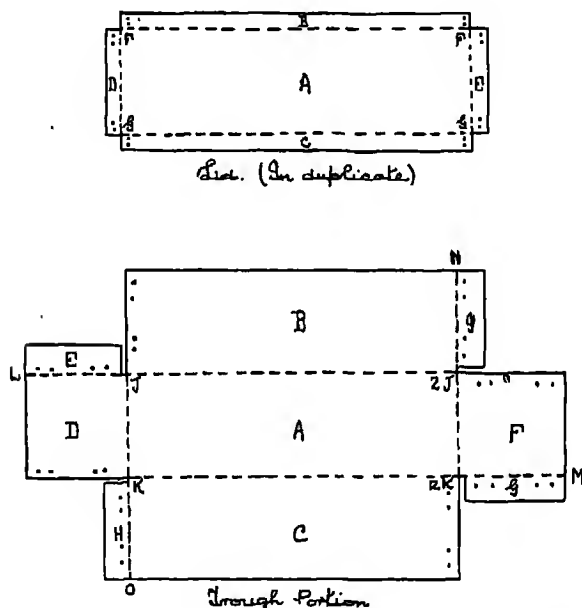


FIG. 108.—THREE-PIECE BOX TAKING TRIOS OF LARGE RUBBER BALLS.

base, B is its back, C is its front, D is its left-hand end, and F is its right-hand end. A quartette of extension flaps in lieu of paper corner-pieces is provided, as shown at E, I, G, and H, each of which carries a pair of wire-stitch holes as indicated by the four dots thereon.

A definite slit is made between E and B terminating at J, another slit is made between I and F terminating at 2J, while a third slit is made between G and C terminating at

2K, and a fourth is made between D and H terminating at K.

Right-angled bends are then arranged for along the lines L2J, KM, JO, and 2KN. Wire-stitching enables E to be attached to B, two pairs of wire-stitch holes being again shown thereon, and in a similar manner I is attached to F, G is attached to C, and H is attached to D.

CHAPTER XX

DISPLAY boxes are becoming extremely popular, and it seems, therefore, desirable to describe and illustrate a pair of these in the present chapter. Many other ingeniously designed folding display boxes are on the market, and at a future date I hope to deal with some more which are both larger and smaller than these.

Obviously, an attractive display box helps to sell the goods it contains, and no pains should be spared to finish it in the most pleasing style. Box users will generally specify what sort of finish they prefer, but it is always open to box makers to offer suggestions in this direction, and these suggestions very frequently prove to be worth substantial sums to customers.

It is claimed that greater care is needed in the cutting out and fitting together of folding display boxes than with the ordinary types, but with modern machinery at hand this need never prove a source of loss. The price for cleverly contrived folding display boxes is not cut to anything like the same extent as with ordinary common types, and usually an excellent profit can be assured.

SMALL AND LARGE SINGLE-PIECE PACKINGS

Fig. 109 shows an extremely popular single-piece box in the pastrycook industry. Taking the various parts, A is the top and B is the bottom, C is the back and D is the front, while E is the top or lid flap, which is provided with a nose. The outer sides are shown at F and G, the inner sides at H and I, while two pairs of side flaps are shown at J and K, and L and M.

In order to render the independent operation of all these various parts possible, cuts must be made along the lines SO, TP, UQ, and again along 2O2S, 2P2T, and 2Q2U. A

slit which is somewhat curved is required in D as shown at Z2Z, while a pair of short straight slits are made

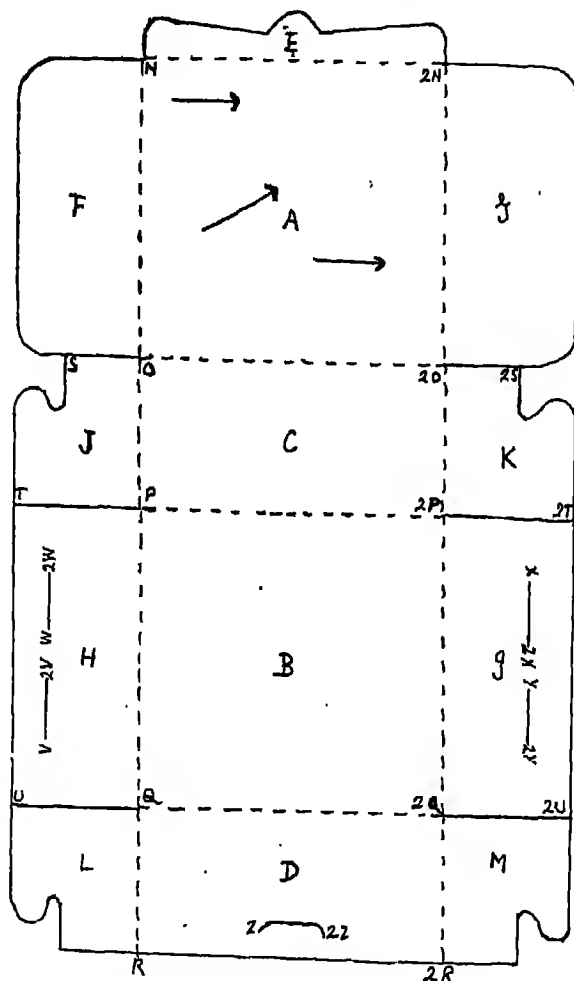


FIG. 109.—SINGLE-PIECE PASTRYCOOK'S CAKE BOX.

in H and I, lettered respectively V_2V , W_2W , and X_2X , Y_2Y .

Right-angled bends are then arranged for along the lines NR, $2R_2N$, N_2N , O_2O , P_2P , and Q_2Q . Needless to say,

the nose of E fits into the slit Z₂Z of D, while the noses of J, K, L, and M fit into the pairs of slits on H and I to form a glueless trough.

Printing is demanded, as a rule, on the outer surface of the top A only, mainly in a horizontal direction, as shown by the two arrows, but also in an angular direction, as shown by the third arrow. Paper covering is, as a rule, ordered over the entire outer surface of the box, but not on its inner surface.

Regarding dimensional data, the length of this box is 7 inches, and its width is the same, and from this it follows

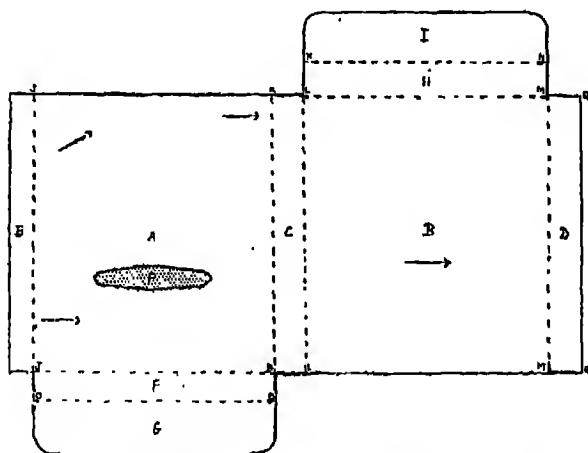


FIG. 110.—SINGLE-PIECE CRAYON PACKET WITH WINDOW.

that A forms a perfect square. The depth is $3\frac{1}{2}$ inches exactly, while the total weight uncharged is nearly $2\frac{3}{4}$ ounces.

Fig. 110 illustrates a crayon packet provided with a much smaller window, and one of entirely different shape to the windowed crayon packet already described. Taking the various parts, A is the front, P being its cut-out window, while B is the back, F is the narrow base, H is the equally narrow top, G is the base flap, I is the top flap, and C and D are the two sides. An attachment flap is provided at E, which, after being heavily covered with adhesive, is attached to the back of D, so that its inner margin, JJ, corresponds with the outer marginal line QQ.

Right-angled bends are arranged for along the lines NN, LM, JK, OO, JJ, KK, LL, and MM. Printing is demanded on the outer surface of A and B only, the direction being that of the various arrows. A paper covering on the entire outer surface, not on the inner surface, is in nearly every instance ordered.

Regarding dimensional data, the length of this packet measured along JK is $2\frac{3}{4}$ inches, its height is $3\frac{1}{4}$ inches, and its width, or more fully the width of its side measured along KL, is $\frac{3}{8}$ in. The total weight uncharged is under $\frac{1}{4}$ ounce.

A PAIR OF IMPORTANT DISPLAY BOXES

Fig. III shows an exceptionally interesting model, which is used first as an outer and then as a display example. This example when put together forms two troughs to take the packets, and shows them well, although it holds them securely.

Taking the various parts, G is the front of the first trough, and D is its back, F being its base. C is the front of the second trough, which is immediately behind D, while E is its base, and B is its outer back, A being its inner back, part of which is exposed as a display slip. The second trough is provided with a pair of ends shown at 2M and 2N, while the front or first trough is similarly provided, the end portions being, however, lettered J and 2J. This trough has, however, a pair of smaller but outer ends lettered 2H and I, and these are extended by nosed flaps lettered H and 2I.

The base of the first trough is extended to the right and to the left by small irregular shaped flaps K and 2K, while the base of the second trough is similarly extended, these flaps being lettered L, 2L. The ends of the second trough are, however, extended by a pair of dually nosed flaps shown at M, N, and are also extended by irregular shaped four-sided subsidiary flaps shown at O, 2O.

Cuts are required, as will be expected, along the lines 3V2V, and 3U2U. Slits are necessary near the top right and left-hand corners at D, as shown at W2W and 3W4W.

Four curved slits are also required towards the four corners of C, these being lettered X, Y, Z, 2Z. To liberate the display slip, a slit must also be made along the angled line 4T5T.

With regard to bends, a double right-angled bend is first

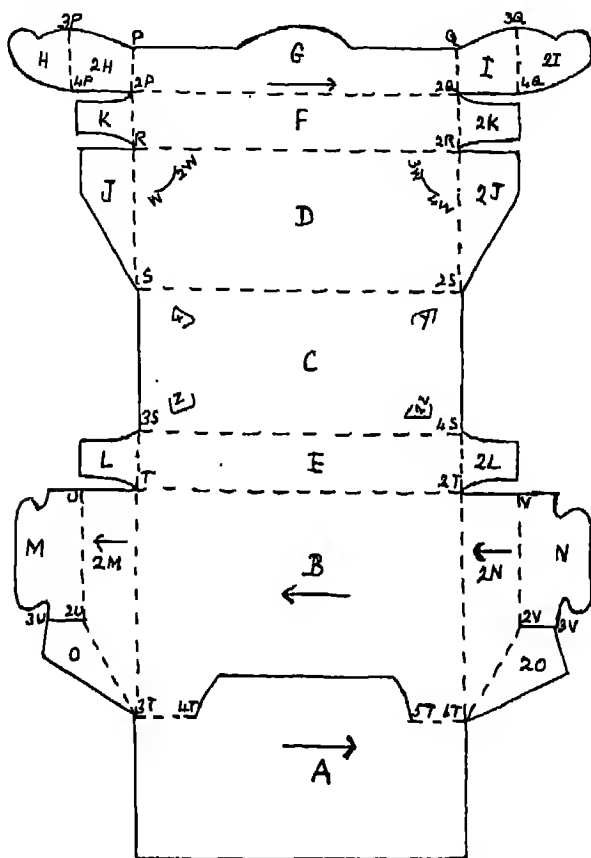


FIG. III.—SINGLE-PIECE FOLDING DISPLAY BOX FOR FILM INDUSTRY.

of all required along the line SzS. Two more double right-angled bends are also required along the lines 3T₄T, and 6T₅T, while another pair of double right-angled bends must be made along the lines 2U₃T and 2V₆T. Single right-angled bends are then arranged for along the lines 2P₂Q

R2R, 3S4S, T2T; 3P4P, P2P, 2PR, RS, 3ST, U2U, T3T, 3Q4Q, Q2Q, 2Q2R, 2R2S, 4S2T, V2V, and 2T6T. The nose of H fits into the slit W2W on D, while the nose of 2I fits into 3W4W thereon. The two noses of M fit into the two slits X, Z, in C, while the two noses of N fit into the other two slits thereon.

Not much printing is required in the case of this example, it being confined as a rule to B, G, 2M, 2N, and A. The direction in every instance is indicated by the arrow. Paper covering may be demanded alike on the outer and inner surfaces.

With regard to dimensional data, the measurements are taken with the box closed for use as an outer. We find that the total length is $7\frac{1}{2}$ inches, while the depth or height is $6\frac{1}{2}$ inches. The width of the end is, however, only $1\frac{1}{2}$ inches, although when the box is open for display purposes the width is exactly double this. The total weight uncharged is 2 ounces.

Fig. 112 shows another extremely useful display box greatly favoured in the children's rubber ball trade. Taking the various parts, we find that A, 2A form the top of the box, E being the top flap, C being the back, B being the base, and D being the outer front. The top flap E forms, of course, the inner front after folding.

The main ends are extensions of B, and are shown at F and H. Two pairs of end flaps, however, form extensions of D and C respectively, these being lettered L and M, and J and K. The card of these is cut out to form a nose on each of the shape indicated. The ends themselves are extended to the right and to the left respectively by small end flaps G and I, which, after folding, serve to strengthen the lid.

Slits must be made along the lines 2R3R, V2V, W2W, X2X, and Y2Y. The first slit is to enable A to be used as a display plate, and the other four slits are for the reception of the noses of the flaps L, M, J, and K, which, after folding, give rise to a neat and very compact trough.

With regard to bends, a double-right-angled bend must be made along each of the lines R2R and 3R4R. A closing bend, which is a full right angle, is arranged for along the

line S2S, but this bend is dispensed with after the box has been opened for display purposes. Full right-angled bends are required, as will be gathered, along the lines O2O, P2P, Q2Q, NQ, T2T, 2N2Q, and U2U. Printing is, as a rule, desired on the outer surface of D, 2A, A, F,

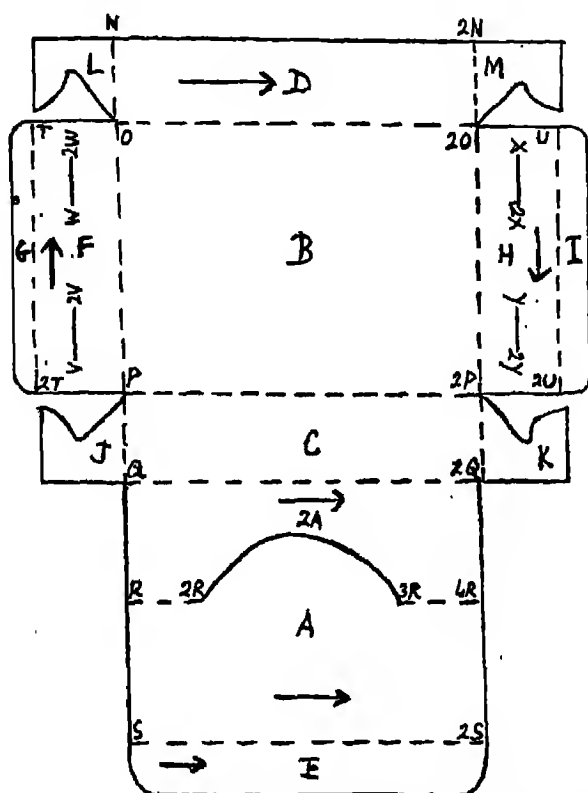


FIG. 112.—SINGLE-PIECE FOLDING DISPLAY BOX FOR RUBBER-BALL INDUSTRY.

and H, the direction being that of the arrows. A paper covering is almost always ordered over the entire outer surface.

Regarding dimensional details, the length of the box is $6\frac{1}{4}$ inches, while its width is 5 inches only, and hence in this case we are not dealing with a square example. The depth

is $1\frac{1}{2}$ inches, while the total weight uncharged is nearly $1\frac{1}{2}$ ounces.

INTERESTING FOUR-PIECE EXAMPLES

Turning now to some simpler boxes, Fig. 113 shows a four-piece fancy goods example, the end being in duplicate.

The main box is sketched out first of all, and its base is shown at A, its front at C, and its back at B. These two portions are each fitted with a pair of stout heavily gummed paper slips shown shaded at H, I, J, and K, the exposed portions adhering to the extremities of the ends. A pair of wire-stitch holes is found alike at the right-hand and left-

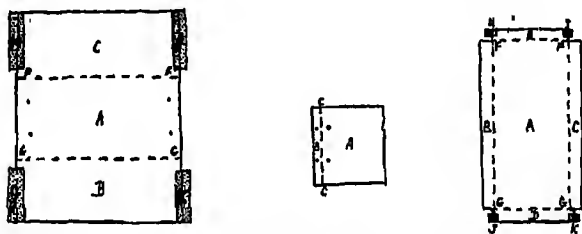


FIG. 113.—FOUR-PIECE BOX FOR FANCY GOODS TRADERS' WORK BASKETS.

(Showing Main Box, End and Lid.)

hand end of A, while right-angled bends are required, as will be expected, along the lines FF and GG.

Only one end is shown in the drawing, as both are identical in design. The main end is indicated at A, and the end flap is shown at B. A right-angled bend is made along CC, and B, which carries a pair of wire-stitch holes, which are shown more clearly on A, through which they also penetrate, is securely fastened to A of the main box along the line FG, or conversely along the line GF.

With regard to the lid, this is not attached to the box by any other means except its own grip. The main lid top is sketched out at A, B and C being the two sides, and D and E the lid ends. These last are fitted with heavily gummed stout brownish paper slips shown shaded and lettered above and below for the sake of clearness, H and I, J and K

respectively. Right-angled bends are necessary, as will be expected, along the lines FF, FG, GG, and GF.

With regard to finishing, no printing on any surface is usually demanded, and neither the outer nor the inner surface of the box is, as a rule, ordered paper-covered.

With regard to dimensional data, the length of this box is $12\frac{3}{4}$ inches, while its width is 6 inches only. The depth is 5 inches, and the total weight uncharged, taking all portions together, amounts to nearly $4\frac{3}{4}$ ounces.

The enormous increase in the popularity of picture post-

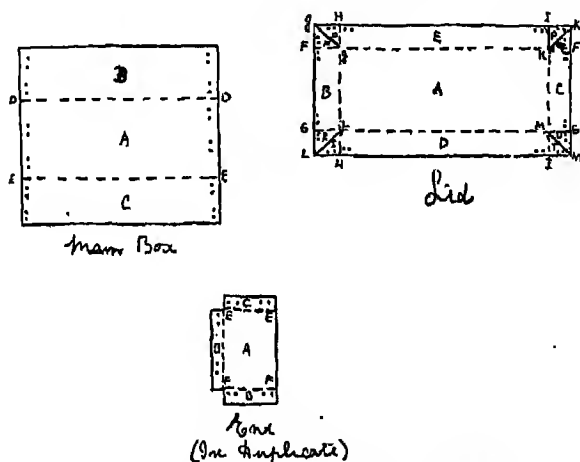


FIG. 114.—FOUR-PIECE POSTCARD PACKER'S BOX.

cards has necessitated the manufacture of special boxes to contain large quantities of them. One of these is sketched out in Fig. 114, only three pieces being shown in the drawing, as the end is in duplicate.

Taking the main box first, A is its base, B is its back, and C is its front, these forming a flat moderate-sized rectangle. Each portion contains at each end, as will be seen, two pairs of wire-stitch holes, as it is more economical and more rapid as a rule to stitch with wire than to use glue. Right-angled bends are arranged for along the lines DD and EE only.

Taking now the end, which is made exactly in duplicate, A is the main end, B is the end attachment flap so far as

the base of the box is concerned, while C and D are the end attachment flaps so far as the sides are concerned. Right-angled bends are arranged for along the lines, EE, FF, and FE. B, C, and D each contain two pairs of wire-stitch holes, corresponding with those already discussed in the case of the main box.

Now in regard to the lid of this interesting and exceptionally useful model, A is the main lid top, D is its front, E is its back, and B and C are its ends respectively. The front is extended to the left and to the right by two triangular flaps lettered S and T, while the lid back is similarly extended by two other flaps identical in shape, lettered O and P. The end B is extended in an upward and downward direction by another pair of triangular flaps lettered N and R, while the other lid end C is also extended in the same directions by flaps identical in shape, but lettered Q and U.

In order to secure independent operation of the various parts, cuts are made along the lines JJ, KK, MM, and LL. Right-angled bends are then arranged for along the lines FF, GG, HH, and II.

One pair of wire-stitch holes is shown in each of the triangular flaps, N, O, P, Q, U, T, S, R, and two pairs will be noticed in B, E, C, and D. In practice O is wire-stitched on to the outer surface of B, and N on to the inner or under surface of E, and in a similar manner the other corners are made equally secure.

In regard to finishing, no printing is, as a rule, demanded on the outer or inner surface of any portion of this example, postcard packers attaching to it their own labels if they so desire. A paper covering over the entire outer surface is often ordered, however, and this takes the form of strong, but inexpensive, yellowish material.

With regard to dimensional details, the total length of this example is no less than 15 inches. Its width is $5\frac{1}{2}$ inches only, and the depth is still less, viz., $3\frac{1}{2}$ inches. The total weight uncharged, taking all four portions together, is just under $7\frac{1}{2}$ ounces, and from this it will be gathered that stout material is employed, as the weight of the wire stitches is, of course, very small.

CHAPTER XXI

IN the present chapter boxes in use in and therefore required by the toy trade, the games concern, the soap boiler, the cigarette packer, and the manufacturing stationer will be taken up. Although these trades differ very widely from each other, their box requirements are such that so far as the present examples are concerned it is quite possible to serve them even in a comparatively small box-making establishment. More elaborate models are obviously wanted by these trades in addition to the simple ones selected, and it may be possible to cover these, and give illustrations of actual examples at a later date.

Two of the boxes, viz., those in which toy motors and toy submarines are packed, come from the Continent, a point which British box-makers may like to note. These do not differ greatly from well-known British examples, but the price per thousand is lower, owing to the different conditions which obtain in countries across the water.

SINGLE-PIECE TOY MOTOR AND TENNIS BALL BOXES

Fig. 115 shows a single-piece carton in which foreign-made toy motors are sold by fancy goods traders in the British Isles. Taking the various parts, A is the front, B, 2B, 3B being the back, C the base, D the top, and E, 2E, 3E the attachment flap. The narrow shaded strip 2E only is covered with adhesive, and this is attached to the back so that it adheres to and completely conceals the narrow shaded strip 2B.

The ends are in four pieces, the extreme inner ends being shaded and shown at G, I, F, and H. The middle ends consist of two twice-slitted rectangular flaps shown at L and M, the slits thereon being lettered U, T, V, and W. The outer ends are formed by a pair of dually-nosed flaps J and K, the noses of which slip into the slits on L and M.

Definite cuts are made to separate the various portions, as shown in the diagram. Thus G and M are separated by a cut terminating at $2P$; G and K are separated by a cut terminating at $2Q$; while K and I are similarly separated by a cut terminating at $2R$. These slits are repeated in the

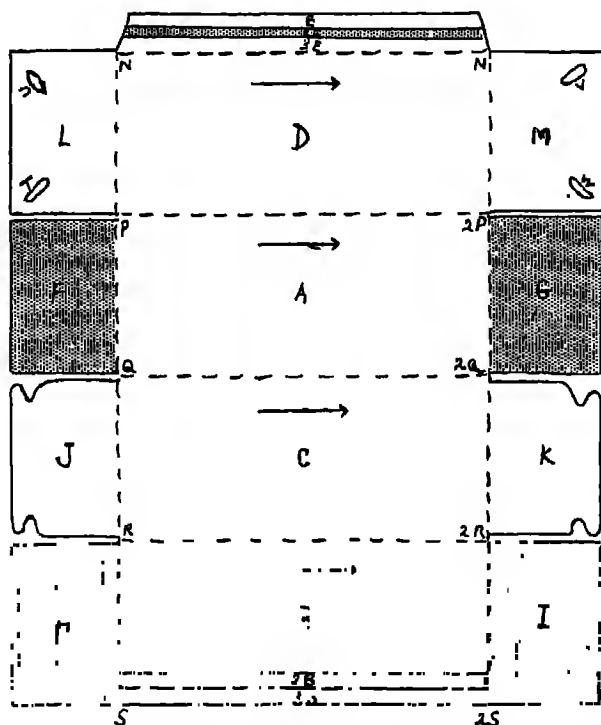


FIG. 115.—SINGLE-PIECE EXAMPLE FOR THE TOY MOTOR TRADE.

case of the other ends, and terminate at P, Q, and R respectively, in order to free L from F, F from J, and J from H.

Right-angled bends are arranged for, as will be expected, along the lines NN, P_2P , Q_2Q , R_2R , and also along NS and N_2S . Printing is demanded on the outer surface of A, B, C, and D only, green inks being favoured, and the direction of the print being that of the four arrows.

Regarding dimensional data, the length of this packet or carton is $8\frac{1}{2}$ inches, its width is $3\frac{3}{4}$ inches, and its depth is the same, *i.e.*, the ends form perfect squares. The total weight unchanged is just under $1\frac{1}{2}$ ounces.

Fig. 116 shows a single-piece tennis-ball box, which can,

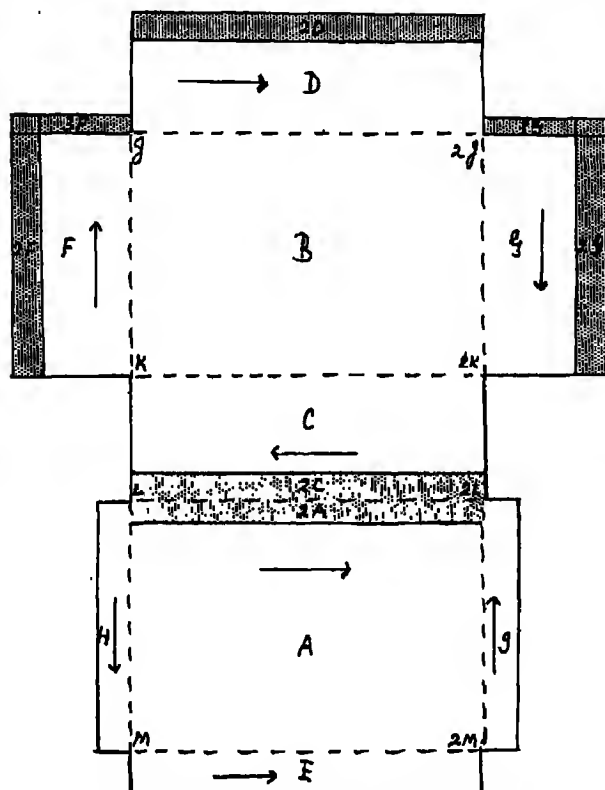


FIG. 116.—TENNIS BALL TRADERS' SINGLE-PIECE BOX.

if box manufacturers prefer, be made in two pieces. Taking the various parts, B is the base, and A is the lid top, E is the lid front, H and I are the lid sides, C is the back of the box itself, D, 2D form the front of the trough, and F, 2F forms one trough end, while G, 2G forms the other. A strengthening strip of stout paper or even linen is provided to form the hinge of the lid and trough, half of it being

attached to the trough as shown at 2C, and the other half attached to the lid as shown at 2A.

Right-angled bends are next arranged for along the lines J2J, K2K, L2L, M2M, and also along the rather shorter lines JK, 2J2K, LM, and 2L2M.

In regard to the joining of the corners, it will be noted that F, 2F is extended by a shaded strip 3F, and that G, 2G is extended by another shaded strip 3G. These form the exposed portions of the stout, heavily-gummed paper corner pieces, an equal width being concealed on the trough ends themselves. The other two corners of the trough are similarly treated, but only two corners of the lid are joined by paper strips, viz., at M and at 2M respectively.

The lid front and ends cover a portion, as will be expected, of the trough front and ends, and for convenience those portions which are concealed are shown shaded at 2F, 2D, and 2G. Printing may be demanded in several directions, but is mostly confined to A, C, D, E, F, G, H, and I, the direction being that of the arrows thereon. The whole of the outer surface of the box may be demanded paper-covered, but not the inner surface.

Regarding dimensional data, the length of this useful example is 8 inches exactly, while its width is $5\frac{1}{2}$ inches only, and its depth is approximately $2\frac{3}{4}$ inches. The total weight uncharged, including the linen strip and paper covering already referred to, is just under $3\frac{1}{2}$ ounces.

TWO-PIECE EXAMPLES FOR SOAP AND CIGARETTES

The trial size box is becoming very popular in the soap trade, and one of these made in two pieces is sketched out in Fig. 117. Taking the lid first, A and B form the lid top, C, 2C form the back, D, 2D the front, E, 2E one end, and F, 2F the other end. Thumb-holes I and J are cut out of the front and back to enable the box to open more easily. The corners are joined by the usual heavily-gummed paper slips not illustrated in the drawing, while right-angled bends are required, as will be expected, along the lines GG, GH, HH, and HG.

The whole of the outer surface of the lid is paper-covered,

the width of the inner surface margins being shown by $2C$, $2D$, $2E$, and $2F$, or, in other words, their extremities are formed by the lines MM , LL , NN , and KK . Printing may

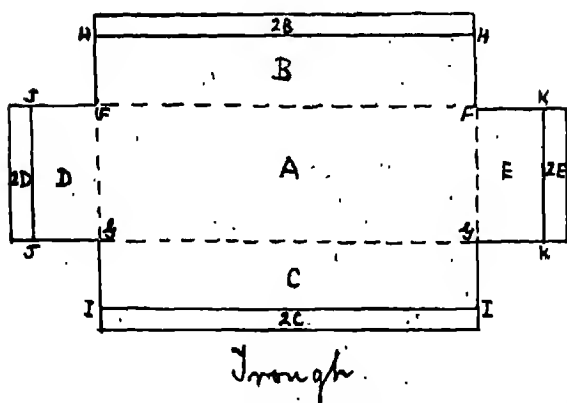
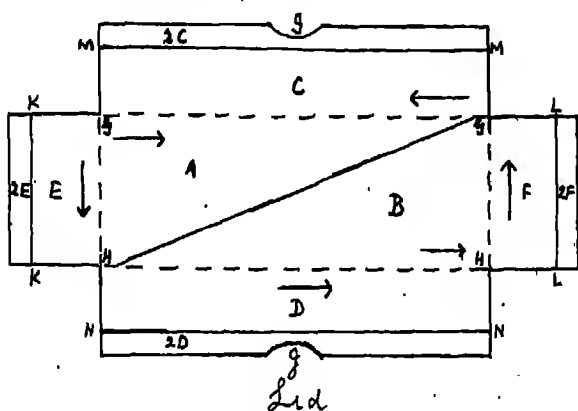


FIG. 117.—TWO-PIECE TRIAL SIZE SOAP BOILERS' BOX, TAKING PAIR OF PATS.

be demanded on the outer surface in two, three, or more colours, but in most examples the portions lettered A, C, and E are in one colour, while those lettered B, D, and F are in the other, and the line HG , therefore, forms the junction point of the two colours.

Turning now to the trough, A is the trough base, B, 2B form its back, C, 2C form its front, D, 2D one end, and E, 2E the other. The corners are joined in a similar manner to that already indicated, and right-angled bends are in this case required along the lines FF, FG, GG, and GF.

The front and back of the trough do not, of course, contain thumb-holes. The entire outer surface is, however, paper-covered, the inner margins of this being approximately indicated by the strips 2B, 2E, 2C, and 2D, or, in other words, are bounded by the lines HH, KK, II, and JJ. No surface of the trough carries any print as a rule.

Regarding dimensional data, the length of this two-piece example is $4\frac{1}{2}$ inches, while its width is $1\frac{3}{4}$ inches only. The depth is less, viz., 1 inch, and the total weight uncharged, taking both portions together, is just under an ounce.

In the case of the tennis-ball box illustrated in this chapter we saw that it could be made in two pieces. In the case of Fig. 118 the cigarette box is made in two pieces, but it may, if preferred, be manufactured in a single portion, and a somewhat similar single-piece model has already been described and illustrated in this series.

Regarding it, however, as a two-piece example in which it usually occurs, and taking its lid first, we find that A is the lid top, B is its front with a thumb-hole H, which is rather prominent in so small an example, C and D are the lid ends, and E is the paper hinge, the concealed portion of which, adhering as it does to the lid top, is not shown in the drawing, and is often very much larger than the exposed shaded portion. Right-angled bends are required along the lines FF, GG, and GF, while a hinge bend is also made along FG, forming the boundary of the shaded strip E.

The end C is joined to B by means of one of the usual heavily-gummed stout paper strips, while the other end D is also attached to B by the same means. Printing is required in several directions, alike on the outer and inner surface of the lid top, the direction of the arrows indicating, however, that on the outer surface. With regard to the lid ends, a couple of lines of print only are generally demanded on the

outer surface, the direction being that of the pairs of arrows in each case.

Turning now to the trough, A is the main trough base, B and C are the ends, E is the front, and D is the back.

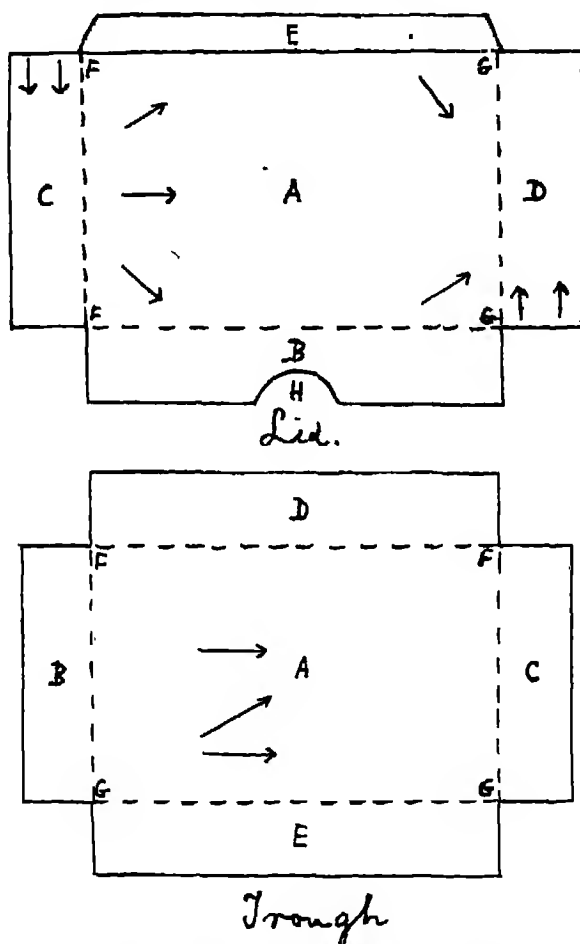


FIG. 118.—TWO-PIECE BOX FOR THE CIGARETTE TRADE.

The paper hinge E of the lid is attached to the upper portion of D of the trough, by means of glue, but it does not seem necessary to indicate the width of this in the drawing.

Right-angled bends are arranged for, as will be expected, along the lines FF, FG, GG, and GF, the corners in all four instances being joined by heavily-gummed stout paper slips which are not illustrated. As in the case of the lid, so also with the trough, a paper covering over the entire outer surface is usually demanded. Printing is ordered on the outer surface of the trough base only, the direction being that of the arrows. As many as seven lines of print may be ordered; one line of such declaring the number of cigarettes contained in the packet.

Regarding dimensional data, the following should be carefully noted :—

Total length, $4\frac{1}{4}$ inches ; total width, $2\frac{7}{8}$ inches ; depth, $\frac{3}{4}$ inch ; total weight uncharged, taking both portions together and including paper covering, $\frac{3}{4}$ ounce.

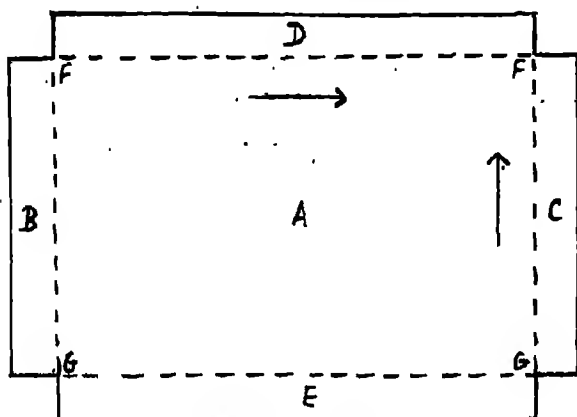
TWO-PIECE ENCLOSURE SLIP AND TOY SUBMARINE MODELS

Although enclosure slips are much more used in America than in the British Isles at the present time, box-makers will probably find it useful to have a design handy which will take a thousand such duplicate slips. This is sketched out in Fig. 119, and is very easily manufactured.

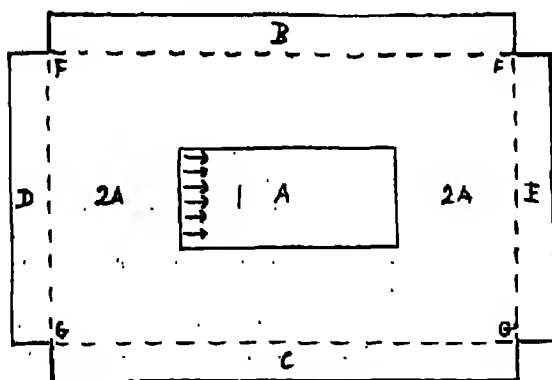
Taking the lid or cover first, A is the main lid top, B and C are its ends, D and E are its back and front, and the two arrows show the direction of the print on the outer surface of the lid top only. The corners are joined by rather long but narrow paper strips, which are well gummed, right-angled bends being required along the lines FF, FG, GG, and GF, while the whole of the outer surface of the lid or cover is paper-covered, although the printing in practice is generally upon an adhesive label over this. The inner margins of the paper covering range from half the width of the back and front D and E to nearly the whole width of the ends B and C. The lid is unattached to the trough except by its own grip, although occasionally various sealing devices are resorted to.

Turning now to the trough, A, 2A form the main trough base, A being the printing area thereon, which may be

filled, and usually is, with no less than six lines of rather bold type, containing the manufacturer's name, description, particulars of a speciality, address, and telephone number. The trough back is shown at B, the trough front at C, while



Lid or Cover.



Trough

FIG. 119.—TWO-PIECE DESIGN TAKING THOUSAND DUPLICATE ENCLOSURE SLIPS.

D and E form the two ends respectively. The corners are again joined by the usual heavily-gummed paper strips, which once more are rather longer and rather narrower than

those usually met with. Right-angled bends are required along the lines FF, FG, GG, and GF, while the whole of the outer surface of the trough is generally demanded paper-covered, the inner margins of this being approximately the same as those mentioned in the case of the lid.

Regarding dimensional data, the length of this example is 5 inches exactly, while its width is $3\frac{1}{8}$ inches, and its depth only just $\frac{1}{2}$ inch. The total weight uncharged, taking

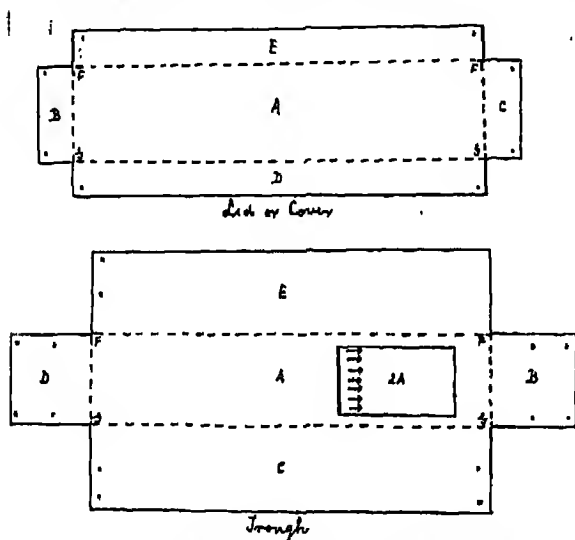


FIG. 120.—TWO-PIECE MODEL FOR TOY SUBMARINE TRADE.

both portions together and allowing for paper covering and printer's label, is $\frac{3}{4}$ ounce.

Fig. 120, the last of the present chapter, illustrates a two-piece Continental toy submarine box, of which many thousands come to this country. Taking the lid or cover first, A is the long narrow top, E is the back, D is the front, and B and C are the two ends. These each contain two wire-stitch holes in their corners, as shown by the pairs of dots, and from this it will be correctly gathered that the corners are joined by wire stitches rather than by gummed paper strips. Right-angled bends are required, as will be obvious, along the lines FF, FG, GG, and GF. The outer

surface of the lid is paper-covered, but there are no turned-over inner margins of this. This portion of the box does not carry any print as a rule either on its outer or inner surface.

Now with regard to the trough, A, 2A form the long narrow trough base, 2A being the label area, upon which may be demanded, unless a separate adhesive label is used, no less than seven lines of print in a foreign language, or in a mixture of languages, in the direction of the seven arrows. The trough back is again shown at E, one end is shown at B, the trough front at C, and the other end at D.

Each of these portions contains two pairs of wire-stitch holes, as indicated by the dots within their shorter margins, and from this it will again correctly be assumed that the corners are joined by pairs of wire stitches rather than by the ordinary use of heavily-gummed paper strips. Right-angled bends are required as before along the lines FF, FG, GG, and GF, and, as in the case of the lid, the whole of the outer surface of the trough is paper-covered, but there are no turned-over inner margins of this.

Box-makers should note that the lid is not attached to the trough by any other means except its own grip, although occasionally toy submarine packers make use of a thin rubber band. Good quality but rather dark-coloured straw-board is favoured for this model, as it has been found that if it is made of very cheap thin material the contents are apt to get damaged in transit.

With regard to dimensional data, the total length of this useful example is $8\frac{3}{4}$ inches, while its width is less than a quarter of this, viz., 2 inches. The depth is $1\frac{1}{4}$ inches, and this makes the ends not quite square, while the total weight uncharged, taking both portions together, is $1\frac{1}{4}$ ounces.

CHAPTER XXII

It is becoming increasingly fashionable to sell both books and cakes in cardboard boxes, and box makers, therefore, should familiarise themselves with as many actual examples as possible. Then again, the fancy goods trade uses enormous quantities of boxes widely varying in type, and here again it seems advisable to draw attention to typical examples. Most box makers will, of course, be familiar with the fact that tailors require quantities of boxes made of varying qualities of strawboard, paper-covered or plain, and, although some of these have been already described and illustrated in this book, it seems desirable to take up another pair which are widely used, and which can be manufactured in long numbers at a reasonable cheap rate.

It has been repeatedly stated in different chapters that while actual dimensions are given, boxes of similar type to those described may be required of different dimensions. This should specially be noted in the case of the present half-dozen, as every one may be required in a larger or, in some cases, a smaller form, though otherwise it is identical in type, *i.e.*, it is built on the same plan as the sketch.

SINGLE-PIECE BOOK AND CAKE BOXES

Fig. 121 illustrates a single-piece box in which pocket dictionaries are sold to retailers for resale to the public. This example can be made in two pieces if preferred, in which case the line L2L forms a hinge instead of a bend.

Considering the model, however, as a single-piece example, in which it usually occurs, A is the lid top, B is the base of the box, C is the back, D is the front, F and G are the trough ends, H and I are the lid ends, E is the lid front, and J is the exposed portion of a corner flap, a similar width being concealed on I, and after folding the exposed portion is fully

concealed on E, the corner K being joined in a similar manner. The shaded portion 2F is the exposed section of another almost square stout heavily-gummed paper flap, a similar width being concealed on F, and after folding the exposed portion adheres to and completely conceals 2D, the corner 2N being joined in a similar manner; while

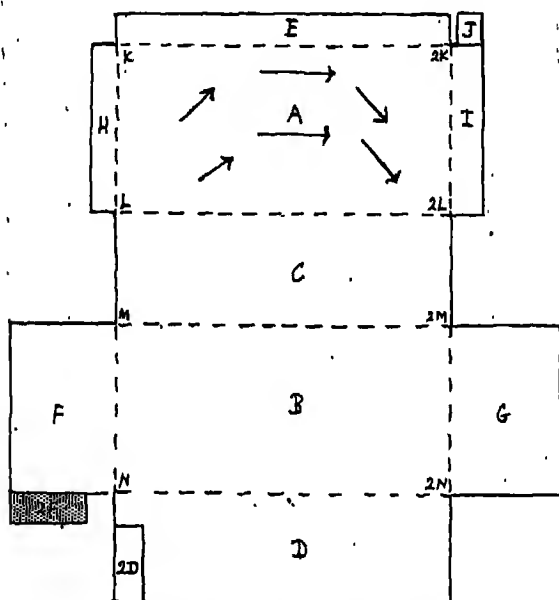


FIG. 121.—SINGLE-PIECE BOX FOR SALE OF POCKET DICTIONARY.

in this instance, though not in the case of the lid, the corners M and 2M are also joined in precisely the same way.

Right-angled bends are arranged for, as will be expected, along the lines K2K, L2L, M2M, N2N, KL, 2K2L, MN, and 2M2N. The bends of the corner flaps are full right angles, as goes without saying, but these are not lettered.

The whole of this model is demanded paper-covered on every surface. Stout, dark-coloured paper is used for the inner surface, except for narrow margins and the inner surface of the lid; it is also used for the outer surface of the base. Brighter coloured paper is, however, used for the

other outer surfaces, for narrow inner margins round the extremities, and occasionally also for the inner base. White paper is used, or creamy-white, for the inner surface of the

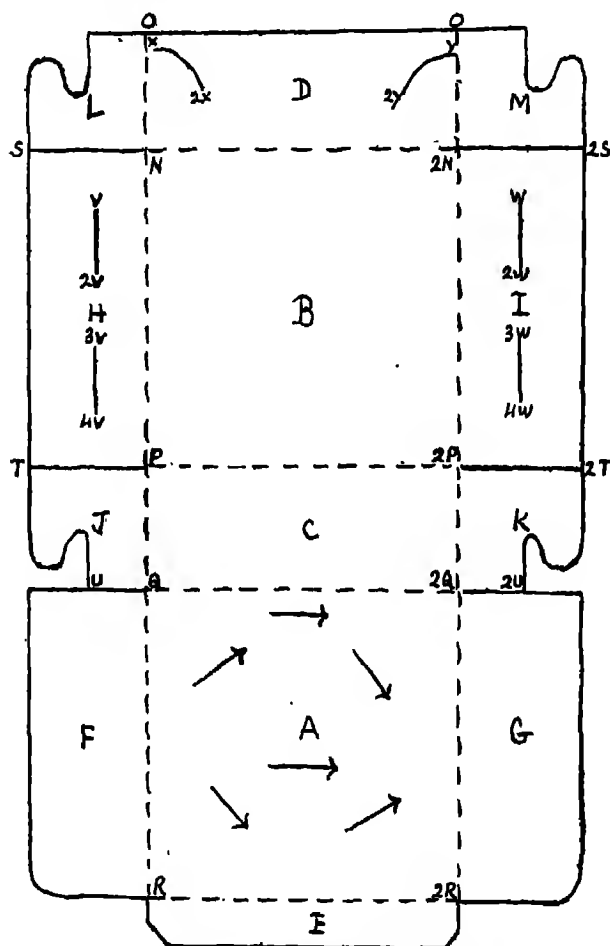


FIG. 122.—SINGLE-PIECE CAKE PACKER'S PRINTED BOX.

lid, and on this printing in several directions, as indicated by the arrows, is always ordered. No printing of any kind is generally demanded on any portion of the outer surface.

Regarding dimensional data, the length of this box is

8½ ins., its width is 4½ ins., and its depth is 2½ ins. only. The total weight uncharged, including the paper covering, is 4½ ozs. exactly.

Fig. 122 shows an attractive and much-used cake packing box, which is proving very popular at the present time.

Taking the various parts, A is the lid top, B is the base of the trough, E is the lid front, C is the back of the box, D is the trough front, F and G are the two lid ends, H and I are the two trough ends, while the four flaps L, M, J, K, extending the trough back and front respectively, are subsidiary end flaps, the noses of which fit into the pairs of slits V2V, 3V4V on H, and W2W, 3W4W on I. Curved slits for the insertion of the angular lid front E are made on D, these being lettered X2X and Y2Y.

In order to render possible the independent operation of all these parts, several slits of varying length though perfectly straight must be made. These are required, as will be gathered, along the lines SN, TP, UQ, and also along the lines 2Q2U, 2P2T, and 2N2S. Right-angled bends are then arranged for along the long lines OR and O2R, while shorter but otherwise similar bends are also made along the lines N2N, P2P, Q2Q, and R2R.

The outer surface only of this model is generally demanded paper-covered, white or creamy-white paper being favoured. Printing is demanded in the form of embossed though colourless type on the outer surface of the lid top only in several directions, as shown by the various arrows thereon. The nature of the print usually takes the form of the telephone number, the name of the firm who supply the cakes, and their address.

Regarding dimensional data, the length and width of this packet are each 6½ ins., the depth is 2½ ins., and the total weight uncharged is just under 1½ ozs.

TWO FANCY GOODS TRADERS' EXAMPLES

Fancy goods traders, in common with other types of shopkeepers, are interested in purchasing boxes which are pilfer-proof. One of these is shown in Fig. 123, this being widely employed for the packing of pincushion dogs.

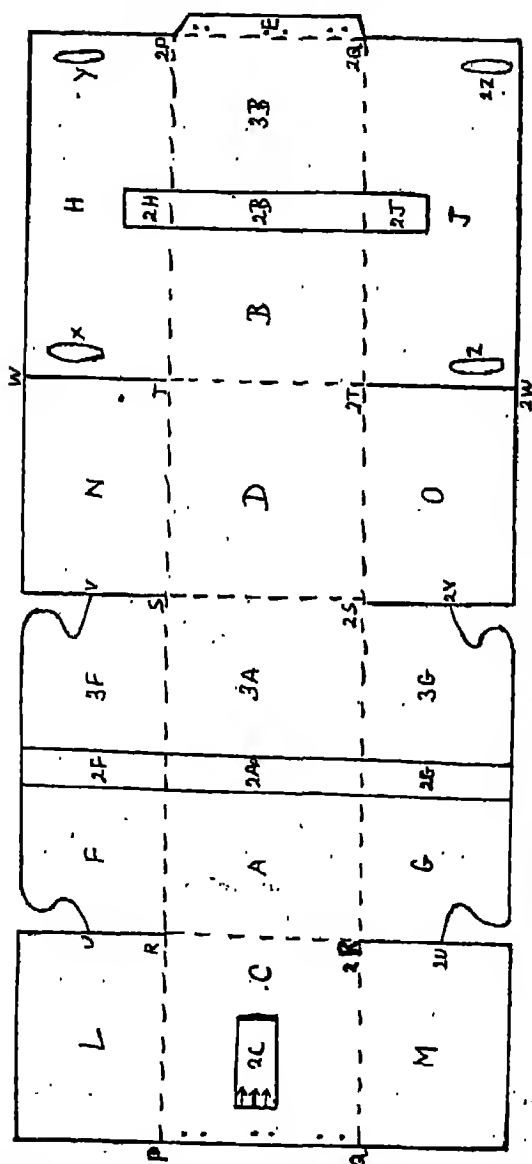


FIG. 123.—SINGLE-PIECE FILTER-PROOF PACKET FOR PACKING PINCUSHION DOGS.

Taking the various parts, A, 2A, 3A form the front, B, 2B, 3B form the back, C, 2C forms one end, 2C being the

label area carrying three lines of print in the direction of the triad of arrows thereon, while D is the other end, and E is the attachment flap, which carries a trio of pairs of wire-stitch holes, this indicating that it is wire-stitched to the back of C, as shown by the wire stitches thereon, so that its inner margin 2P2Q corresponds with the outer margin of C shown by the line PQ.

The top is made up of many parts. Thus L and N form the extreme inner top, H, 2H with the slits X and Y form the middle top, and F, 2F, 3F form the extreme outer top, the noses of which fit into the slits X and Y on H. The base again is made up of many parts. Thus M and O are the extreme inner base flaps, J, 2J with the slits Z, 2Z form the middle base, and G, 2G, 3G form the extreme outer base, the noses of which fit into the slits Z, 2Z of J.

To secure the independent operation of all these parts, cuts are required, as will be expected, along the lines UR, VS, WT in the case of the top, and 2R2U, 2S2V and 2T2W in the case of the base. Right-angled bends are then arranged for along the lines P2P and Q2Q, which, as will be seen from the drawing, are of great length, and similar bends must also be made along the much shorter lines R2R, S2S, T2T, and 2P2Q.

With regard to the pilfer-proof device, this takes the form of a single strip consisting of 2G, 2A, 2F, plus 2H, 2B, and 2J. This is made of paper, which is heavily gummed, and which sometimes, but by no means always, carries print. The position of the strip after the box has been opened is exactly shown in the drawing, and, of course, opening the box at both ends to make a flat drawing divides the single strip into two. Apart from the pilfer-proof device, this model is not generally demanded paper-covered, and except for the label area and occasionally on the sealing strip, as already mentioned, no printing is demanded on any portion of its outer or inner surface.

Regarding dimensional data, the total length of this example is $7\frac{3}{4}$ ins., while its width and depth are each $4\frac{3}{4}$ ins. exactly, thus the ends form perfect squares. The total weight uncharged, including the pilfer-proof device, is $3\frac{1}{2}$ ozs.

Another type of fancy goods traders' box made in two pieces is shown in Fig. 124. Taking the lid first, A is the lid top, B and C are the main lid ends, while D and E are

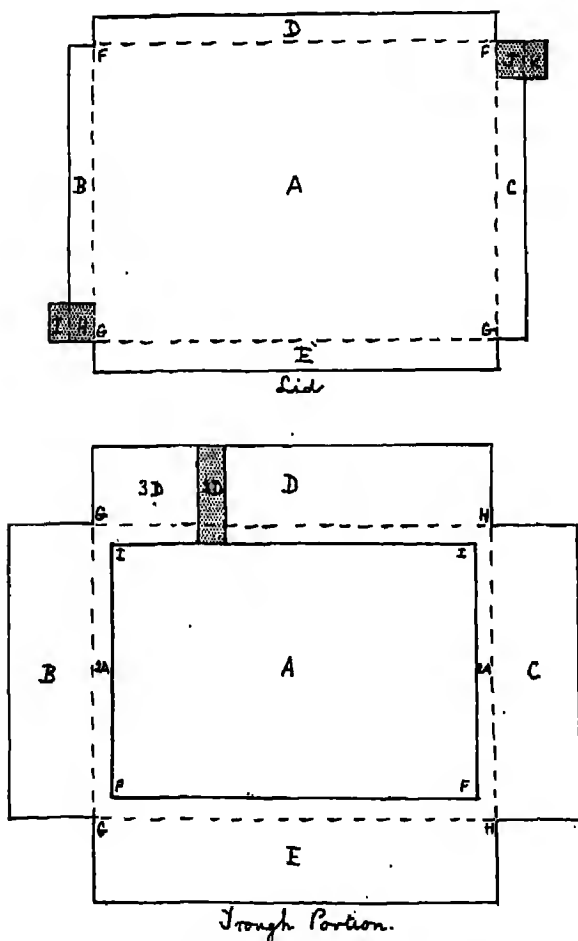


FIG. 124.—POPULAR TWO-PIECE FANCY GOODS TRADE BOX.

the lid back and lid front respectively. Right angled bends are arranged for along the lines FF, FG, GG, and GF.

The corners of the lid, but not those of the box itself, are joined in a curious manner. A stout piece of heavily gummed

paper is attached to C as shown by the shaded portion J, and to B as shown by the shaded portion H. This is extended to the right by a strip of similar width shown at K in the one case and I in the other, a double right-angled bend then being made so that K completely conceals the back of that portion of C which J conceals, or in the case of B, which H conceals. This alone, however, does not hold the corners together, but if J is extended in an upward direction by a strip of similar length, and K is similarly extended, and I and H are extended by strips of similar width in a downward direction, it follows that on folding over these unillustrated portions D will be held to C, or B to E by a paper flap alike on its outer and inner surface. This device makes a very strong corner, and, as fancy goods traders' boxes have to stand rough usage, it is strongly recommended. In some instances, it should be pointed out, the widths of I and K are less than those of J and H, instead of equal as in my drawing.

This lid is paper-covered with cheap white material on its entire outer surface, the inner margins being barely half an inch. It carries no print of any kind on any surface.

With regard to the trough portion which is sketched out below, the main trough base consists of A, 2A, the strip 2A being paper-covered (but A is not) on its outer surface. The two ends of the trough are made up of B and C, the front is made up of E, and the back is made up of D, 2D, 3D, the shaded portion being the rather wide overlap of the outer surface paper covering of the front, back and ends. Right-angled bends are arranged for, as will be expected, along the lines GH, HH, HG, and GG, the trough not as a rule being secured to the lid by any other means except its own grip.

No printing of any kind is ordered as a rule on any surface of the trough, and cheap but stout buff board, white on its inner surface, is usually preferred. The corners of the trough are joined by the usual stout heavily-gummed paper flaps, quite distinct from the elaborate corner pieces of the lid.

Regarding dimensional data, the length of this example is 11 ins., its width is 8 ins., and its depth is $2\frac{3}{4}$ ins. only.

The total weight uncharged, taking both portions together, is just under $5\frac{1}{2}$ ozs.

TYPES OF TWO-PIECE TAILORING TRADE BOXES

Fig. 125 shows the trough only of a tailoring trade box, which, though wire-stitched, is none the less collapsible for packing purposes, an important item in these days when space for storage is so costly. Taking the various parts, A is the trough base, B, 2B, 3B are the trough back, C, 2C, 3C

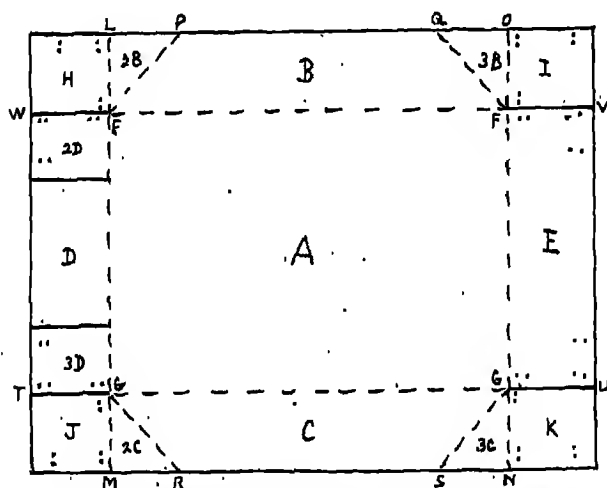


FIG. 125.—USEFUL TYPE OF TWO-PIECE TAILOR'S BOX. .
TROUGH ONLY.

are the trough front, D, 2D, 3D, is one end, E is the other end, H and I, being extensions of the back, are two of the end flaps, and J and K, being extensions of the front, are the other pair of end flaps. The overlap of H on one end is shown clearly by 2D, and the overlap of J thereon is similarly shown by 3D.

It will be obvious that some cuts are necessary if this trough is to be put together. Only four cuts are necessary, however, and these are lettered WF, TG, UG, and VF. The bends are of two kinds, *i.e.*, single right-angled bends and double ones. Single right-angled bends are required,

as will be expected, along the lines LM, ON, FF, and GG, while double ones, though these are only used for collapsing the box in order to enable it to be stored flat, are required along the lines PF, QF, GR, and GS.

Twelve wire stitches are required finally to complete the trough, three in H, three in I, three in K, and three in J. By means of the first and last trio H is attached to 2D, and J to 3D, while I is attached to E, and K to E in the case of the second and third. The approximate positions of the stitches are shown by the pair of dots, *i.e.*, three pairs on 2D, three on 3D, and six pairs on E.

With regard to the lid of this useful example, this is made on exactly the same plan though a shade larger, and is only attached to the trough by its own grip. The lid and trough are usually ordered paper-covered on their entire outer surface, but in the majority of instances no print of any kind is ordered either on their outside or inside.

Regarding dimensional data, the length of this useful example is 20 ins. exactly, its width is substantially less, *viz.*, 14 ins., and the depth is 4 ins. only. The total weight uncharged, taking the trough and lid or cover together, is 1 lb. exactly.

Fig. 126 shows another type of tailoring trade box, the trough only being illustrated, as the lid is identical with it in character, except that it is just a shade larger.

Taking the various parts, A is the trough base, D, 2D, 3D is its back, E, 2E, 3E is its front, B, 2B, 3B is one end, and C, 2C, 3C is the other. Left-hand end flaps are provided by N and R, right-hand end flaps being provided by Q and U, back extension flaps are shown at O and P, and front extension flaps at S and T.

Cuts are required, as will be expected, along the lines W₂W, Y₂Y, Z₂Z, and X₂X. The bends again are of two kinds, *i.e.*, single right angles and double right angles. Single bends of 90 degrees are required, as will be expected, along the lines HH, II, FF, and GG. Double right-angled bends, *i.e.*, turning twice over, are required along the lines K₂W or conversely 2W₂K, but not both, LY or Y₂L, but not both, 2MZ or ZM, but not both, and 2X₂J or 2XJ, but

not both. The object of the diagonals K2K, L2L, M2M and J2J, is to enable the trough or lid to be collapsed in either direction at will.

With regard to wire-stitching, three stitches are shown, and will be found in 3D, another trio in P, a third trio in T, a fourth in 3E, a fifth trio in 2E, and a sixth trio in S. Two other trios of wire stitches are also required, as will be expected, the first in O and the second in 2D. On putting the box together we find, therefore, that 2D is fastened to and completely conceals N, while O is fastened to and

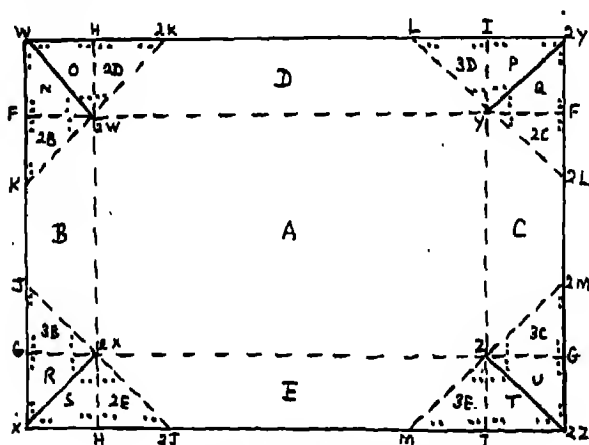


FIG. 126.—POPULAR BOX FOR PROVINCIAL TAILORING TRADE.
TROUGH ONLY.

completely conceals 2B, the same thing applying in the case of the other corners.

The outer and inner surface of this box may or may not be demanded paper-covered, either in the case of the trough or in the case of the lid. Printing on the outer or inner surface alike of the trough or lid is rarely ordered, as tailors attach thereto their own adhesive label.

Regarding dimensional details, the length of this example is $19\frac{1}{2}$ ins., while its width is exactly a foot. The depth is $3\frac{1}{2}$ ins. only, and the total weight uncharged, taking both trough and lid or cover together, and including all wire stitches, is 14 ozs. exactly.

From the weight given in the case of the last two diagrams it will be quite evident that heavy material is employed in their manufacture. This experience has shown is necessary, as it is no unusual custom for tailors to send suits long distances by post or passenger train in these boxes with a comparatively light inner wrapping consisting of paper only. Thin flimsy board would not stand such transit, and box makers should, therefore, err on the substantial side rather than otherwise, even if they have to charge a half-penny or two more per dozen boxes.

CHAPTER XXIII

ATTENTION has been called in previous chapters to the fact that boxes and packets which are somewhat similar in appearance are often required for trades of widely different character. This is brought home again in the case of some of the models about to be discussed in the present chapter. Though each is distinct from any we have so far had, the differences are such that machines can be adjusted in most instances to produce them along with other simple designs of a like character. The manufacture of somewhat similar boxes for many different trades is recommended to paper box firms, not merely on account of the economies which may be effected, but also on account of the fact that the market is generally a steadier one. If we concentrate, as some few box firms do, on the containers required by a particular industry, and that trade becomes unusually depressed, our machines may be standing idle half the week, whereas if we cater, owing to taking advantage of small differences, for a dozen or more industries, it is very unlikely indeed that all will be acutely depressed at the same period, and it is frequently found that during one industry's period of depression an unusual rush of orders may be had from others.

**TWO-PIECE PACKINGS FOR CRACKERS AND
ENVELOPES**

Fig. 127 illustrates a very popular two-piece example taking no less than thirty-six large Christmas crackers. I will describe the lid first, and its top is made up, as will be seen from the drawing, of A plus 2A. The rectangle HKLMH is the printing area on the outer surface of the lid, this frequently being occupied merely by a large attractively printed paper label. The direction of the print is dual, being shown by the two arrows thereon, but box-makers should

note that some printing is usually demanded on the other side, *i.e.*, the inner surface of the lid, but as the amount varies very much it is not indicated in the drawing.

The lid front is shown at E, the two lid ends are shown at B and C, while the narrow strip D is the exposed portion

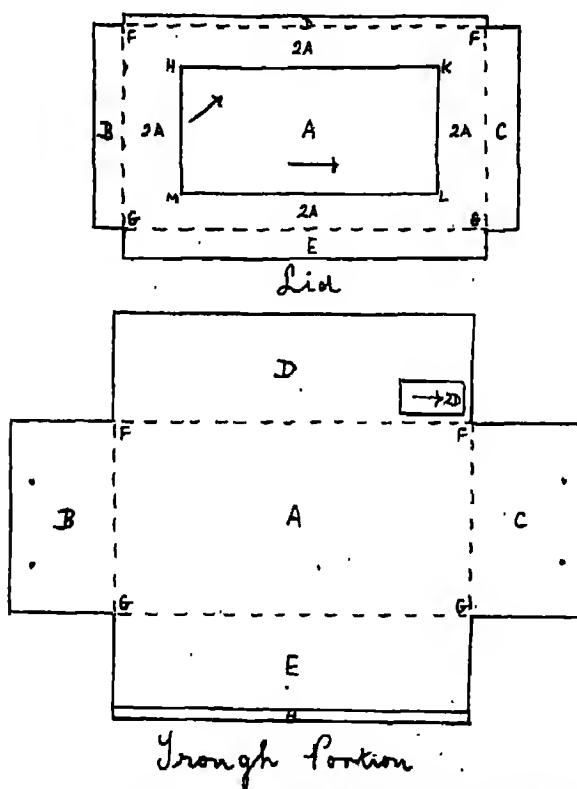


FIG. 127.—TWO-PIECE THREE-DOZEN CHRISTMAS CRACKER BOX.

of a stiff textile strip, which is adhesive-covered, and enables the lid to be attached to the trough portion, D then covering and completely concealing H thereon. The two front corners of the lid are joined by the usual rather stout heavily-gummed paper slips, not shown in the drawing, and right-angled bends are arranged for along the lines FF, FG, GG and GF.

Turning now to the trough, A is its base, B and C are its ends, which carry in each case a pair of ribbon or string holes shown by the two dots thereon. D is the front of the box, 2D being the comparatively small printing area thereon, while E plus H form the back of the trough. All four corners have corner pieces, but instead of stout paper being used, strips of a textile fabric are favoured, the length of these, however, not being the full depth of the trough. Right-angled bends are arranged for, as will be expected, along the lines FF, FG, GG and GF.

A paper covering is usually demanded over the entire outer surface of the lid, and over the outer surface of B, C, D and E of the trough. Paper covering of a cheaper character may also be ordered for the outer surface of A of the trough, white unprinted material being favoured.

Regarding dimensional data, the length of this box is no less than 17 inches, while its width is about half, viz., 9 inches. The depth is 5 inches only, and the total weight uncharged, taking lid and trough together, amounts almost to 17 ounces.

Although envelopes are usually packed in boxes taking five hundred, there are still several makers who insist on boxes holding a full thousand being supplied. One of these is sketched out in Fig. 128, and as it is comparatively simple, a description of no great length will prove sufficient.

Taking the lid or cover first, A is the lid top, B and C are its sides, and D and E are its ends. The corners are joined by extra stout heavily-gummed paper flaps, two of which only are shown, the attached portions being shaded and lettered H and J, while the exposed portions are not shaded and are lettered I and K. Right-angled bends are arranged for, as will be realised, along the lines FF, FG, GG and GF. The lid is not attached to the box by any other means except its own grip.

Turning now to the trough, although this is shown sketched out in a single piece, it is frequently met with in the form of three pieces, *i.e.*, the ends are cut separately, and are of rather stouter material than the rest of the box. Taking it as a single piece, however, we find A is the trough

base, B and C are its two sides, D, 2D form one end, and E forms the other. The rectangle within which D is forms the printing area, and if direct printing is not ordered on the box, an adhesive label of this size, and printed in the direction of the arrow, is usually attached to the outer surface. The corners are joined by long extra stout heavily-gummed paper slips, the exposed portions only being shown

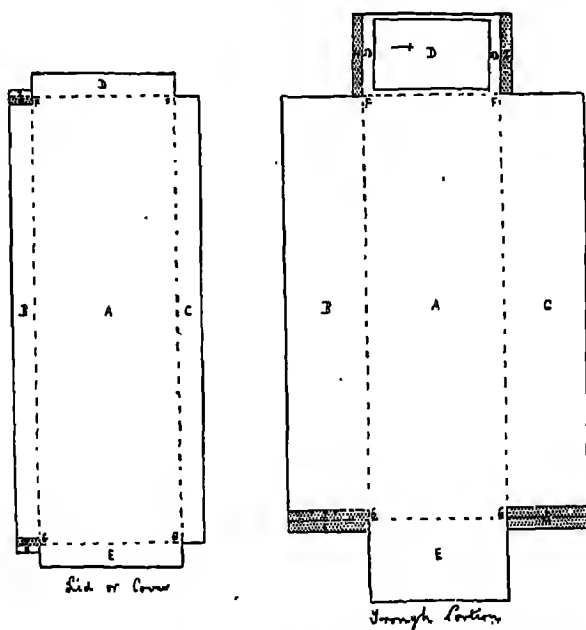


FIG. 128.—TWO-PIECE SINGLE-THOUSAND ENVELOPE PACKING EXAMPLE.

lettered H and I, while the complete strips are indicated by J and K in the case of the side B, and by L and M in the case of the side C. Right-angled bends are arranged for again, as will be expected, along the lines FF, FG, GG and GF. Thin greyish inexpensive paper board or box-board is in favour for the production of this useful example.

Regarding dimensional data, the length of this box is greater even than that of the cracker example already sketched out, being 19 inches exactly. The width is $6\frac{1}{4}$ inches

only, and the depth is even less, viz., $3\frac{1}{2}$ inches. The total weight uncharged, taking lid and trough together, is $5\frac{1}{2}$ ounces.

SOME SMALLER TWO-PIECE PACKINGS

The next two examples can easily be manufactured in long numbers in the same boxworks with comparatively small adjustments to machinery. Many thousands of each are consumed in the course of a year, the first by the fancy goods man, and the second by the toy trader.

Confining our attention first of all to Fig. 129, and starting

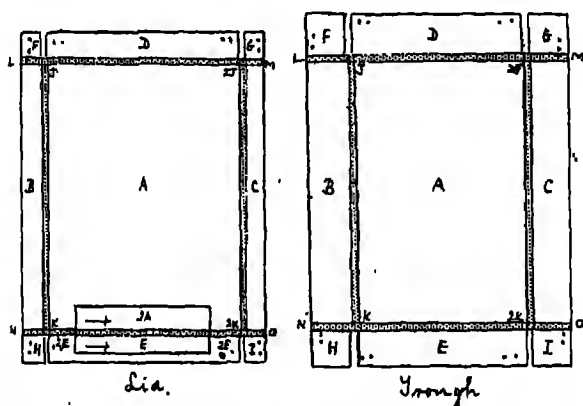


FIG. 129.—TWO-PIECE EXAMPLE, TAKING SIX CYLINDRICAL WRITING SETS.

first with its lid, we find that A, 2A form the lid top, 2A being the printing area, carrying print in the direction of the arrow. The sides of the lid are found in B and C, while one end is made up of D only, and the other is made up of E plus 2E, E being a continuation of the printing area, or a portion of a printed label, which is sometimes substituted for direct printing on the lid itself.

The sides of the lid are extended in an upward and downward direction by a quartette of small rectangular flaps lettered F, G, H and I, these flaps being wire stitched on to the inner surface of the ends D and 2E, a single wire stitch, as shown by the pair of dots, sufficing on each.

Owing to the thickness of the board employed, two bends amounting in all to ninety degrees are generally made instead of a single right-angled bend, along the thick shaded strips LM, NO, JK and 2J2K. F and G are separated from D by two definite cuts, and H and I are separated from E, 2E in a similar manner.

Turning now to the trough, A is the trough base, B and C are its sides, D and E are its ends, and F, G, H and I are inner end flaps, *i.e.*, they are wire-stitched on to the inner surface of the ends D and E, a single stitch sufficing as before. Again, owing to the thickness of the board employed, single right-angled bends are impractical, and double bends amounting in all to full right angles are, therefore, made along the outer and inner margins of the thick shaded strips LM, NO; JK and 2J2K. The box may be demanded paper-covered on its entire outer surface, pale buff material being favoured.

Regarding dimensional data, the length of this box is $8\frac{1}{2}$ inches, its width is 6 inches, and its depth is $1\frac{1}{4}$ inches only. The total weight uncharged, taking lid and trough together, amounts nearly to $2\frac{1}{4}$ ounces.

Fig. 130 shows a less elaborate two-piece rubber ball box than some we have already covered. Taking the lid first, A is its top, B and C are its sides, D and E are its ends, while F, G, H and I are inner end flaps, *i.e.*, they are wire-stitched on to the inner surface of D and E, single stitches, shown by the two dots thereon, sufficing for the purpose. Right-angled bends are required along the lines JJ, KK, LM and 2L2M, while H and I are separated from E by definite cuts, F and G being separated from D in a similar manner.

Turning now to the trough, to which, by the way, the lid is not attached by any other means except its own grip, A is the trough base, B and C are its two sides, D, 2D forms one end, D being the printing area, or in some cases the label area carrying three or four lines of print in the direction of the arrow, while E is the other end. A quartette of inner end flaps, otherwise side extension flaps, is provided, these being lettered F, G, H and I, and they are wire-stitched on to the inner surfaces of 2D, D, in the case of F and G, and

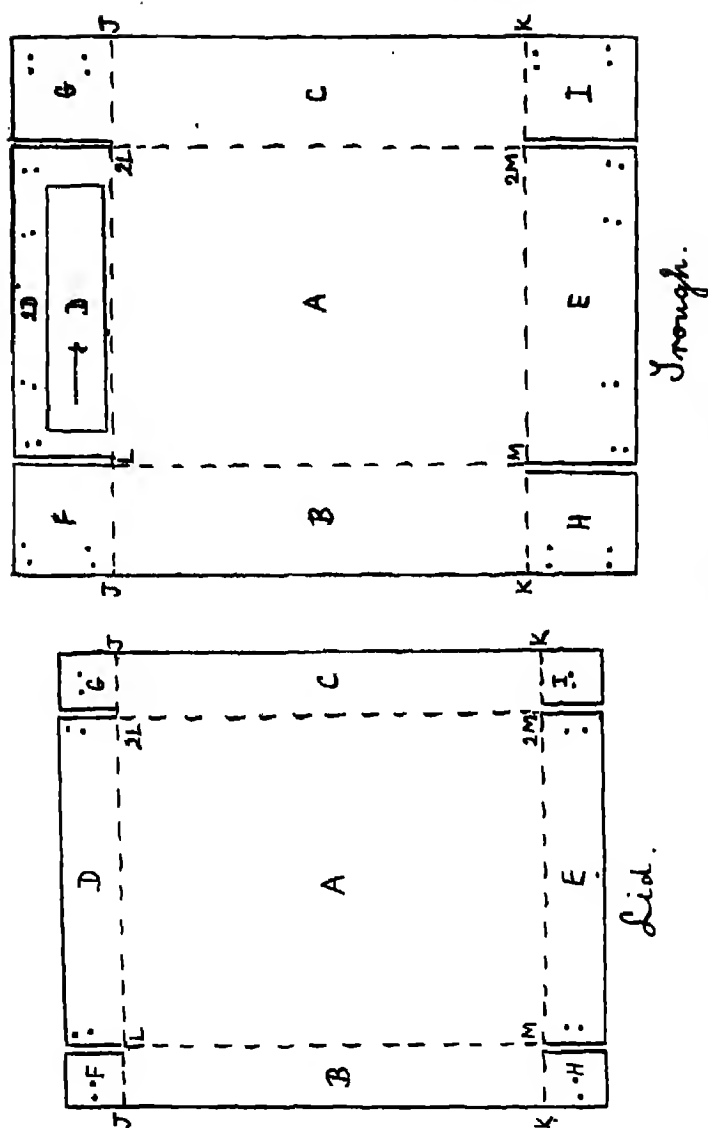


FIG. 130.—TWO-PIECE BOX TAKING TWELVE RUBBER BALLS.

E in the case of H and I ; in these instances, however, two stitches, as shown by the two pairs of dots thereon, being invariably employed. Right-angled bends are arranged for

along the lines JJ, KK, LM, 2L2M as before, and cuts are made terminating at L and 2L to separate F and G from D, 2D, while other cuts terminating at M and 2M are made similarly to separate H and I from E. This box is not as a rule demanded paper-covered, either on its outer or inner surface.

Regarding dimensional data, the length of the present example is 9 inches, while the width is only $6\frac{3}{4}$ inches, and hence we are not dealing with a square example. The total depth is $2\frac{1}{8}$ inches, while the total weight uncharged, taking lid or cover and trough together, amounts exactly to $2\frac{1}{2}$ ounces.

A PAIR OF FOUR-PIECE EXAMPLES

The next two examples are four-piece boxes, but only three portions are shown in the sketches, on account of the ends being in duplicate.

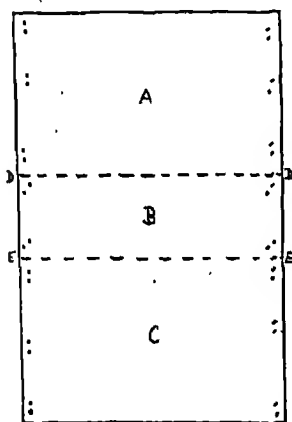
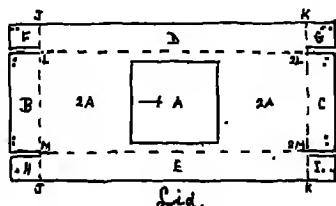
Taking the lid of Fig. 131 first, A, 2A is its top, A being the printing area, or in some cases the label area, carrying a few lines of print in the direction of the arrow on its outer surface. The lid front is shown at E, the lid back at D, and the two ends at B and C.

The front and back are extended by small subsidiary flaps lettered H and I, and F and G, these being separated from B and C by cuts terminating at L, M, 2L and 2M respectively. Right-angled bends are then arranged for, or pairs of bends amounting in all to 90 degrees, along the lines JJ, KK, L2L and M2M. Single wire stitches attach F and H to B, and G and I to C.

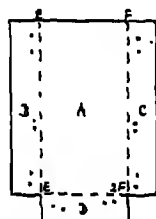
Let us now turn to the main trough, which is sketched out separately. In this instance B is the long narrow base thereof, A is the back, and C is the front. Right-angled bends, or pairs of bends amounting to right-angles, are made along the lines DD and EE. Six wire stitches will be noticed in A, four in B, and six in C.

Turning next to the trough end, which may be cut of course, in duplicate, A is the main end, B and C are the end flaps, by which the end may be attached to the front and back of the main trough, while D is the inner base flap, by

which the end is attached to the inner surface of the base of the main trough, so that its inner margin E2F corresponds with the outer margin line of the main trough DE. Right-angled bends, or bends in pairs amounting in all to full right angles, are made along the lines EE, F2F and E2F.



Main Trough



Trough End.
(9m Duplicate)

FIG. 131.—FOUR-PIECE BOX FOR FLAGS.

Three wire stitches will be found in B, whereby it is attached to A of the main trough, three in C, whereby it is attached to C of the main trough, and two in D, whereby it is attached to B of the main trough. This example is not, as a rule, demanded paper-covered on either surface, but should be made of stout strawboard in order to afford ample protection for its contents.

Regarding dimensional data, the length of this box is

9 inches, its width is 3 inches only, and its depth is no less than $5\frac{1}{4}$ inches. The total weight uncharged, taking all four portions together, and including metallic wire stitches, is approximately $4\frac{1}{2}$ ounces. The lid is not attached to the trough by any other means except its own grip.

Fig. 132 shows another four-piece box, three portions

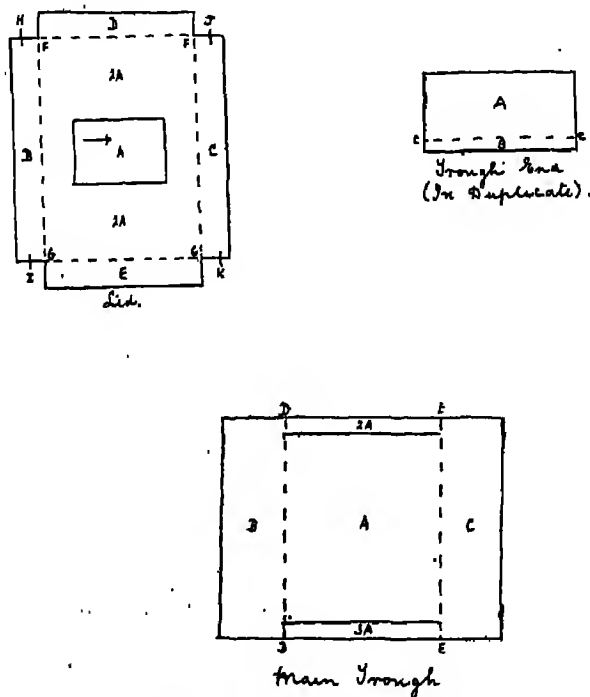


FIG. 132.—FOUR-PIECE EXAMPLE FOR SALE OF PIPE SHOWSTANDS

only being sketched out, as the two ends are in this particular instance identical in character.

Taking the lid first, A, 2A forms its top, A being the printing area or label area, which may be demanded printed in several colours, although only a few lines of wording are generally ordered, these being on the outer surface of the lid top.

The sides of the lid are shown at B and C, and the two

ends at D and E, no heavily gummed paper slips being in this instance required, as the corners are joined by four wire stitches shown at H, I, J and K. Right-angled bends are required, as will be anticipated, along the lines FF, FG, GG and GF.

Turning now to the main trough, its base is made up of A, 2A, 3A, the narrow strips 2A and 3A being adhesive covered on the inner surface, and paper-covered on their outer surface. A similar width of paper, though it is not illustrated, occurs on the inner side of the lines DD and EE. Right-angled bends are arranged for, as box-makers will expect, along these dotted lines, *i.e.*, DD and EE, but no corner slips of paper or wire stitches are necessary as the paper covering used holds the corners together when the ends have been put in.

Only a word or two is necessary with regard to the trough ends, one of which is sketched out. The main end is shown at A, and the end flap at B, this being attached to and completely concealing 2A of the main trough, or 3A in the case of the other end, after a right-angled bend has been made along the line CC.

The entire outer or exposed surfaces of the lid, the trough ends, and the sides of the main trough may be demanded paper-covered, popular-priced brownish material being favoured. Usually, however, as already mentioned, the major portion of the outer surface of the main trough base A is left without paper covering, while no portion of the inner surface carries any paper covering whatever. In some instances the lid is made of strawboard, and the main trough and trough ends are made of paper board, but in many instances one or other is used for all parts of this example.

Regarding dimensional data, the length of this box is 7 inches, its width is 5 inches, and its depth is 2 inches only. The total weight uncharged, taking all four portions together, and allowing for the small wire stitches referred to in the case of the lid, is rather under $1\frac{1}{2}$ ounces, and hence it will be inferred that thin lightweight material is used exclusively in its production.

In the next chapter a number of much-used and exceptionally interesting models will be taken up for illustration and description. I am also hoping in early chapters to return to the question of boxes and packets with windows, as my opinion is that in the very early future there will be an even heavier demand for such models than there has been in the past.

CHAPTER XXIV

ALLUSION has been made on several previous occasions to the boxes and packets most in favour with pharmacists. A very interesting and important tilting example is taken up for discussion in the present chapter, and those box and packet makers who have already a good connection in the pharmaceutical trade will no doubt study it with care.

Box and packet makers are reminded that the pharmaceutical trade is very closely connected with the toilet trade itself, and also with certain branches of the grocery industry. Thus, tooth powder is sold by every pharmacist, and nine-tenths of them also sell crystals or powders for the home preparation of junket. Interesting boxes for holding both these classes of merchandise are described and illustrated in the present chapter, while the remaining examples, although simpler in character, are all of them in demand in large quantities.

TWO TYPES OF SINGLE-PIECE OUTERS

Fig. 133 shows an attractive outer largely used in the tooth powder trade. Taking the various parts, B is the base, C is the front, D is the back, F and H are the main ends, G and I are the end flaps which are tucked inside the box, while E is the attachment flap, which is heavily covered with adhesive and then adheres to the inner surface of D, so that its inner margin U2U corresponds with the outer margin shown by the line PQ.

The front C is extended to the left and to the right by a pair of small irregular shaped flaps lettered L and M, one corner of each of which is rounded off. The back D is similarly extended by a pair of irregular-shaped flaps lettered J and K, but all corners of these are angular. The top is made up of many parts. Thus N and O form its left-hand and right-hand margins, 2A forms the main lid arch,

and A itself forms the main lid, which, however, after opening the container, is used as an extension of the back of the box in an upright direction for display purposes. In order that all these parts may operate independently, several cuts must be made, as will be expected. Following the drawing, we find that these are required along the lines WR,

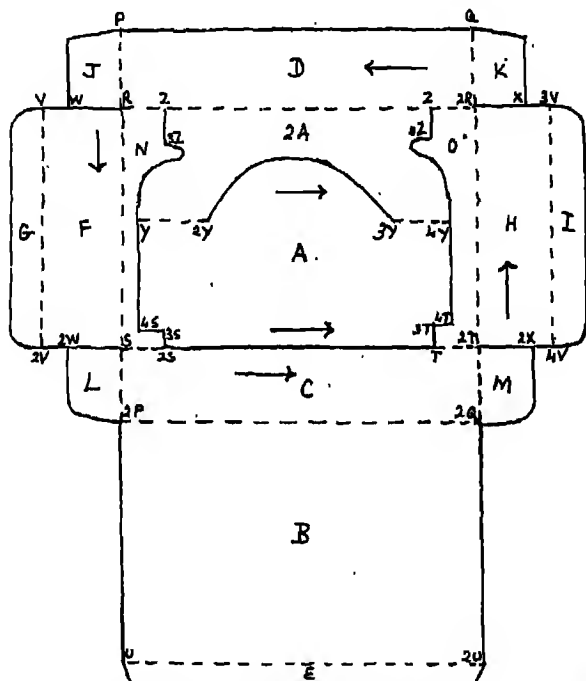


FIG. 133.—SINGLE-PIECE OUTER FOR TINS OF TOOTH POWDER.

2WS, 2RX, and 2T2X. Other cuts must be made along the lines Z3Z, 3Z4S, 4S3S, and 3S2S, in the case of the left-hand lid margin, and Z2Z, 2Z4T, 4T3T, and 3TT in the case of the right-hand lid margin, or, to put it more shortly but less accurately, a pair of irregular curved cuts must be made along the lines Z2S and ZT.

The bends or folds required in this interesting model are, as will be gathered from the drawing, of two kinds, *i.e.*, single

right angles and double ones. Bends of 90 degrees are necessary along the lines R₂R, 2P₂Q, U₂U, V₂V, P₂P, Q₂Q, and 3V₄V. Double right-angled bends must be made along the lines Y₂Y and 4Y₃Y, but these are not used until the box is actually employed for display purposes. Very short but still full right-angled bends are also required along the lines S₂S and 2TT.

We have now before us a closed box which, if marketed in that state, would be difficult to open. Two further cuts are, therefore, made, one along the line 2ST and another round the arc 2Y₃Y. The display lid, then, after the example is charged, rests on the top of the tooth powder tins, and can be lifted up easily, so that its edge 2ST can be put in behind the noses of N and O, to make it rest a shade below the line ZZ.

In regard to finishing, the model may be demanded paper-covered on the whole of its outer exposed surface, and may be ordered printed in one, two, or three colours. The direction of the print is shown by the arrows, and printing is limited to those parts carrying arrows.

Regarding dimensional data, the length of this box is 8 inches, its width is $5\frac{1}{2}$ inches, and its depth is $1\frac{3}{4}$ inches only. The total weight uncharged is just under 2 ounces.

Fig. 134 shows another single-piece display box largely used for the retail sale of junket crystals cartons. Taking the various parts, B is the base, G and I are the outer sides, H and J are the inner sides, D is the outer front, E is the inner front, C is the back, A, 2A together form the lid, and F forms the lid flap.

The back is extended to the right and to the left by two approximately square subsidiary flaps M and N, which, after folding, fit in between the outer and inner sides. The outer front D is similarly extended, these flaps being lettered K and L, and again fitting after folding between the outer and inner sides.

In order that all these parts may operate independently, cuts must be made along the lines TR, 2RU, 2TS, and 2S₂U, as well as around the arc 2VW. The bends again are of two kinds, *i.e.*, single and double right angles, single bends

being necessary along the lines R_2R , S_2S , PQ , X_2X , OP , and $2PQ$, while double ones, *i.e.*, folding the board right over, are made along the lines O_2P , T_2T , U_2U , V_2V , and W_2W . Owing to the fact that the flaps K , L , M , and N fit

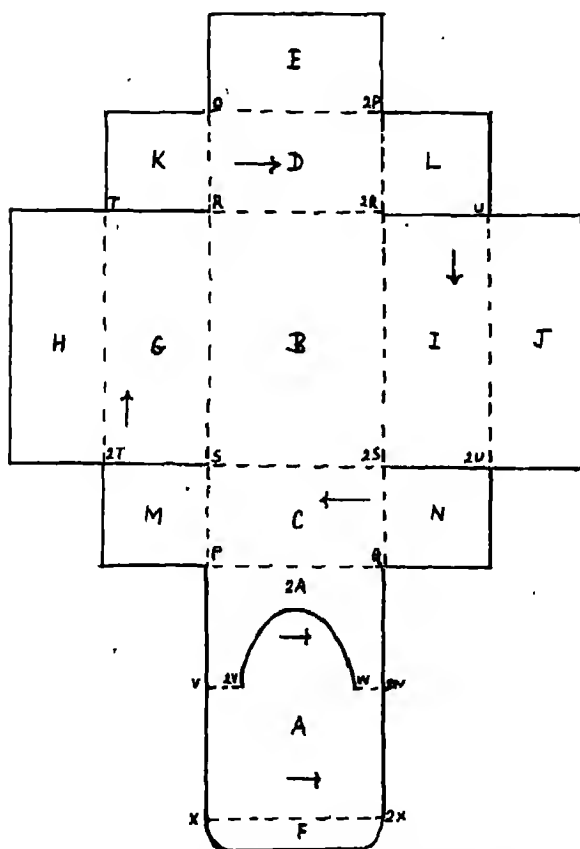


FIG. 134.—SINGLE-PIECE OUTER FOR JUNKET CRYSTALS CARTONS.

between the double thickness sides, no adhesive of any kind is required on any portion of this model to put it together satisfactorily.

An outer surface paper covering may or may not be ordered in the case of the present example. Printing in

several colours on the outer surface is always demanded, and although the parts usually carrying same are shown by the arrows, other parts may also have to be printed in special instances. Then, again, although the direction of the print is usually that indicated by the arrows, this is subject to some considerable variation, and box-makers must only regard it as being an approximate guide.

Regarding dimensional data, the length of this box is $6\frac{1}{4}$ inches, its width is $4\frac{1}{4}$ inches only, and its depth is $2\frac{3}{4}$ inches. The total weight uncharged is just under $1\frac{1}{2}$ ounces.

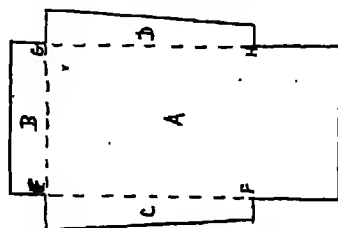
A PAIR OF TWO-PIECE PACKINGS

Fig. 135 shows a useful and attractive type of tilted display box, which is finding extensive employment at the present time. Only a brief description need be given, as the principle of construction is very much the same as that of the last example.

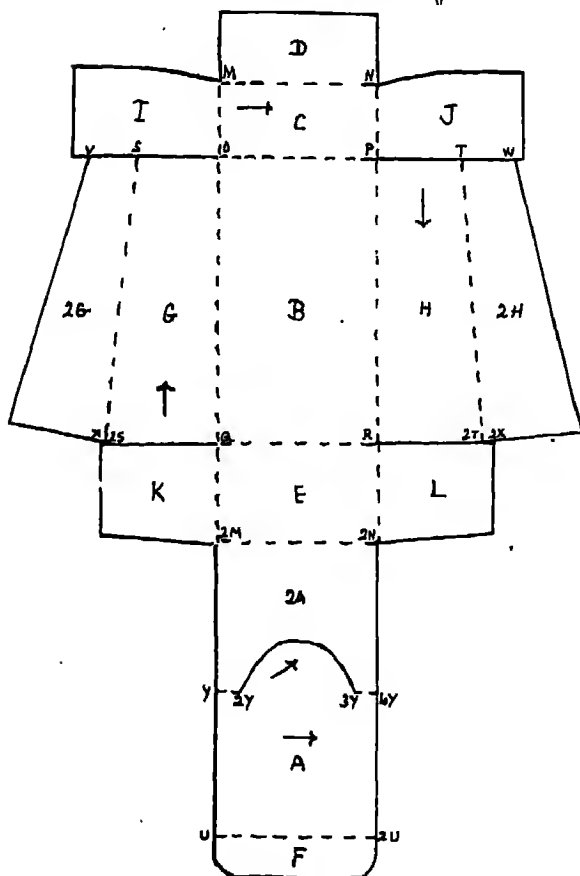
Taking the various parts, B is the base, G, 2G form one outer and inner side, H, 2H form the other outer and inner side, C forms the outer front, and D the inner front, while E forms the back. The lid is made up of A, 2A, the lid flap is shown at F, the back extension flaps are shown at K and L, and the outer front extension flaps at I and J. The shapes of these last four should be carefully noted, as they are of great importance.

Cuts must be made in a rather different manner to the cuts described in the case of the previous drawing. Thus, they are required along the lines VO, XQ, PW, R₂X, and around the arc 2Y₃Y. The bends again are roughly of two kinds, *i.e.*, they consist of single right angles and double ones, angles of 90 degrees or folds containing about this number of degrees being made along the lines OP, QR, 2M₂N, U₂U, M₂M, and N₂N. Double right-angled bends, *i.e.*, folding the card right over, are required along the lines MN, S₂S, T₂T, Y₂Y, and 3Y₄Y. The flaps I, J, K, and L fold in between the outer and inner sides, and hence no adhesive of any kind is necessary to hold this useful model together.

Printing in two or more colours is usually demanded on



Tilted Display Tray



Main Box

FIG. 135.—TWO-PIECE FITTED DISPLAY BOX FOR CATARRH TABLET TINS.

those parts carrying arrows, the direction being in every instance that of the arrows, and in most instances only the outer surface carries any print.

Turning now for a moment to the tilting display tray, which is sketched out separately, this is inverted in the bottom of the box and forms a level table for the goods to be packed on. The top, therefore, is shown at A, one side at C, the other at D, while B forms the back. Right-angled bends are arranged for along the lines FF, FG, and GH. The corners are not as a rule joined. The display tray carries no print on any surface, and is not usually supplied paper-covered.

Regarding dimensional data, the length of the box is 7 inches, its width is $3\frac{1}{2}$ inches, the maximum depth is $2\frac{1}{2}$ inches, and the minimum depth is $1\frac{1}{8}$ inches. The maximum depth of the tilting display tray sides is $\frac{3}{4}$ of an inch, while the minimum depth thereof is $\frac{3}{8}$ of an inch. The total weight uncharged, taking both portions together, is 2 ounces.

Those box and packet makers who are geometric experts will no doubt notice that some of the bends described in the above model as being full right angles are in reality slightly more or slightly less, owing to the depth of the box being different at the front and back instead of being uniform throughout. For the sake of absolute accuracy, therefore, it is best to say that the folding angles are of four distinct forms, viz., single right angles, double right angles, acute angles, and obtuse angles.

Turning now to a much simpler two-piece box, Fig. 136 shows a handy model for the sale of Christmas calendars.

Taking the lid or cover first, A is the main lid top, a portion of which is concealed by 2A. The lid sides are made up of B and C, one end is made up of D and the other of E, plus 2E. Right-angled bends are arranged for, as will be expected, along the lines FF, FG, GG, and GF. It will be noticed that two of the extremities of D, and one each of B and C are shown shaded, these being lettered I, J, and H, K respectively. These shaded portions show the approximate length and width of the stout paper corner

slips used for holding the ends to the sides, the total length of the first slip being H plus I , and that of the second being J plus K .

Not much printing is required in the case of the present example, and this is usually limited to the small area $2A$, $2E$, on the outer surface of the lid top and lid front. The direction is usually that of the trio of arrows, but in some instances as much as six lines of print may be required.

Turning now to the trough portion, sketched out separately, this greatly resembles the lid or cover, A being its

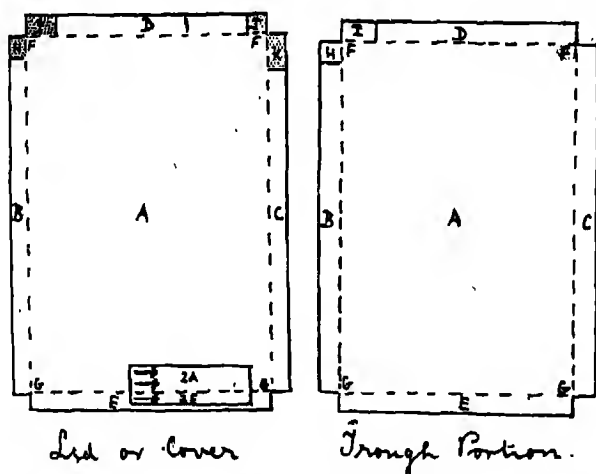


FIG. 136.—TWO-PIECE WEEK-TO-PAGE CHRISTMAS CALENDAR BOX.

base, B and C its sides, D plus I its back, and E its front. Only one corner slip is shown in this instance, but the length of all four approximate to H plus I , the single slips being, of course, broken in two to enable a flat drawing to be prepared.

Right-angled bends are required as before along the lines FF , FG , GG , and GF , but the trough portion carries no printing on any surface. The outer surface alike of the trough and cover may be demanded paper-covered, but cheap grey material usually proves to be quite sufficient.

Regarding dimensional data, the length of this box is $8\frac{3}{4}$ inches, its width is 6 inches only, and its depth is $\frac{1}{2}$ an

inch. The total weight uncharged, taking trough and cover together, is just under $2\frac{1}{4}$ ounces, and box-makers should note that the lid or cover is not attached to the trough by any other means except its own grip.

INTERESTING TWO AND THREE-PIECE EXAMPLES

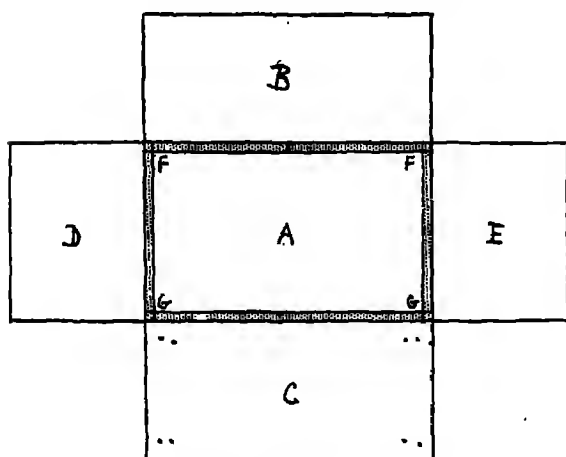
I have alluded to a box which is largely used by watch-makers and jewellers. Fig. 137 shows another important and very widely employed model, alike favoured by manufacturing jewellers and the better class watchmakers.

Taking the various parts, and considering the trough portion first, A is the trough base, C is its back, B is its front, and D and E are its two ends. Right-angled bends are arranged for along the thick shaded strips FF, FG, GG, and GF, or, more correctly, two bends are made, one along the outer and the other along the inner margin of these four shaded strips, each bend amounting to approximately 45 degrees. From this it follows that the edges of the base itself are neatly chamfered. Four pairs of wire-stitch holes will be noticed in the back C, while the four corners of the trough are joined in the manner described and illustrated in the case of the lid.

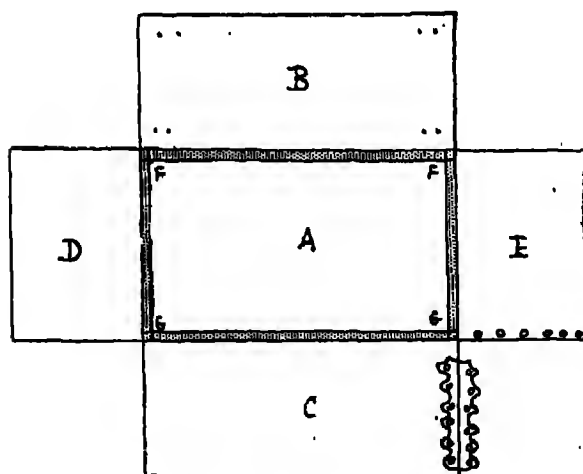
For the sake of clearness the lid is sketched out separately, and A is its top, B is its back, C is its front, while D and E form its two ends. Bends are made along the lines FF, FG, GG, and GF, the edges of the top again being chamfered in a similar manner to those of the trough.

Metallic corner pieces, one of which is sketched out on and extending the lid front, are used for joining all four corners alike of the trough, and two corners only, *i.e.*, those of the front in the case of the lid. These are punched right into the thick board which is used, and when removed a series of six holes is left as shown at E, these, however, not going right through the end. These metal strips result in the corners of the lid and trough being curved or rounded, instead of being chamfered as are the edges of the lid top and trough base.

The lid back is attached to the trough back or rather to the outer surface of the trough back by means of a quartette



Rough Portion.



See.

FIG. 137.—TWO-PIECE METAL-CORNERED MANUFACTURING JEWELLERS' BOX.

of wire stitches shown on both. Thus B completely overlaps C in the case of the back, and C completely overlaps B in the case of the front. With the ends also being double after

the box is put together, it follows that a very strong little model admirable for postal work is obtained.

Regarding dimensional data, the length of this box is $3\frac{1}{2}$ inches, its width is $2\frac{1}{4}$ inches, and its depth is $1\frac{1}{2}$ inches only. The total weight uncharged, taking lid and trough together and including all metallic corner pieces, is just under $1\frac{1}{4}$ ounces.

Fig. 138 shows a three-piece outer very largely used for containing tins of rat and mouse exterminating preparations. Taking the main trough first, this is comparatively simple in character, and resembles the trough of models which have already been described in previous articles. The trough base is shown at A, and this is extended by two inner ends E and F; the trough back is shown at C, and this is also extended by two smaller flaps G and H, one at each end. D forms the inner lid of the box, and B forms the extreme inner front thereof. Cuts are required, as will be expected, along the lines OK and PL, while right-angled bends must be made along IJ, KL, MN, IM, and JN. Wire-stitch holes will be found on D, G, and H, but these I shall speak about later. Printing is only demanded in the case of the trough on the outer surface of C, the direction being that of the arrow.

Turning now to the front and outer ends, which are sketched out in the form of a separate continuous strip, A forms the extreme outer front, and is provided with a thumb-hole F, in order that the box may be more easy to open. The outer ends of the box are found in B and C, and these are extended by end flaps D and E. Right-angled bends are required in this case along the lines IJ, KI, GH, and GG.

A pair of wire-stitch holes is sometimes used for small examples of this box, but in the present case two pairs of wire-stitch holes are deemed desirable, and these will be seen both in C and in B. By means of these stitches the ends C and B are securely attached to the flaps G and H of the trough itself. Printing is demanded on the outer surface of A, B, and C only, the direction being that of the arrows thereon.

Lastly, in regard to the main lid, which also is sketched out separately, the lid top is formed conjointly of A, 2A, while B forms the lid flap. This last is inserted between

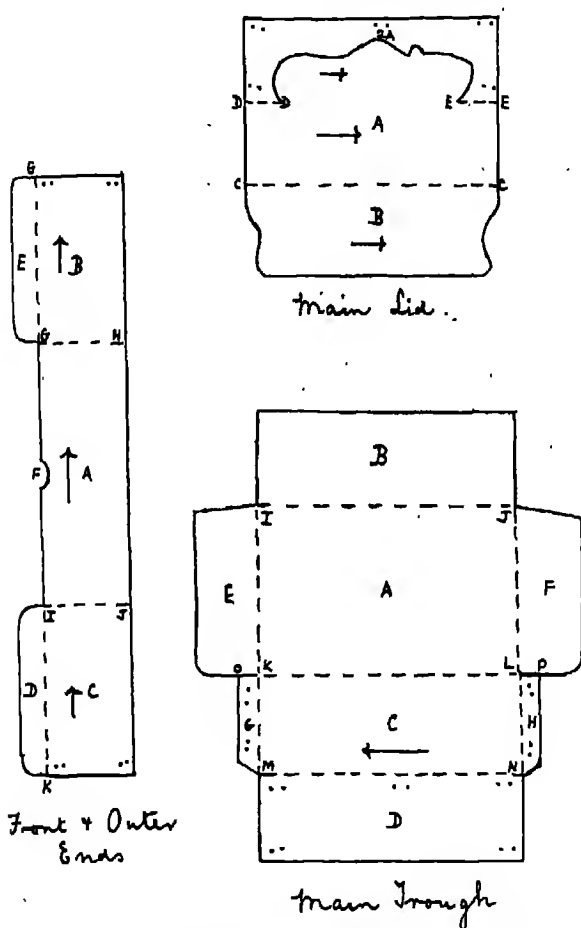


FIG. 138.—THREE-PIECE OUTER FOR TINS OF RODENT EXTERMINATOR.

the outer and extreme inner front already referred to, and therefore the front of the closed box is made up of three thicknesses of board. A single right-angled bend is required along the line CC, this disappearing when the box is used for

display purposes, while double right-angled bends are necessary along the much shorter lines DD and EE. A cut must be made in order to liberate the flap along the irregular curved line which starts at D and which terminates at E.

By means of five wire stitches 2A of the main lid is firmly attached to the outer surface of D of the main trough, which, as already stated, forms the inner portion of the lid, and when the box is charged and merely closed in the ordinary way the bends DD, EE of the main lid disappear.

Very little printing is demanded on the outer surface of the main lid, the example before me containing only four lines of print in the direction of the arrows on A. Four or five lines of smaller type may also be required on the outer surface of B, the direction again being that of the arrow thereon.

Regarding dimensional data, the length of this interesting example is 7 inches, while its width is $4\frac{1}{2}$ inches, and its depth is $2\frac{1}{2}$ inches only. The total weight uncharged, taking all portions together, *i.e.*, front and outer ends, main trough, and main lid, is $1\frac{3}{4}$ ounces.

CHAPTER XXV

ON several previous occasions I have described and illustrated unlined single-piece folding packets. At the end of the present chapter, however, will be found a sketch of a type fitted with a three-piece lining, and box makers should carefully study this, as examples with only minor differences are required by a great many different kinds of industries. Some firms unwisely do not lay themselves out to produce these linings and users, therefore, have either to make them themselves, or purchase elsewhere. That this is a mistaken policy should need little if any emphasis, as all too often users, being unwilling to do business of a similar nature with two different firms, transfer their orders from companies who supply only the packet portions to those who are able to deliver the entire container promptly in long numbers.

In future chapters it is probable that space will preclude my describing and illustrating linings of similar size and character to these when they occur, but when important differences have to be noted, diagrams will be given and suitable text. Thus packets to contain bottles of pharmaceutical emulsions frequently contain linings very different from those in Fig. 144, and users having become accustomed to one will not be content with a substitute.

SINGLE-PIECE EXAMPLES FOR BOOKS AND LAMP BULBS

It is becoming increasingly common to pack valuable books in cardboard boxes to protect them from damage in transit. A useful example of a single-piece stapled book box is sketched out in Fig. 139, and in this sketch A is the top, B is the base, C is one end, and E is the other. The two sides are each made up of two thicknesses of board; thus H and I are the outer left- and right-hand sides, while F and G are the inner left- and right-hand sides. The end E is

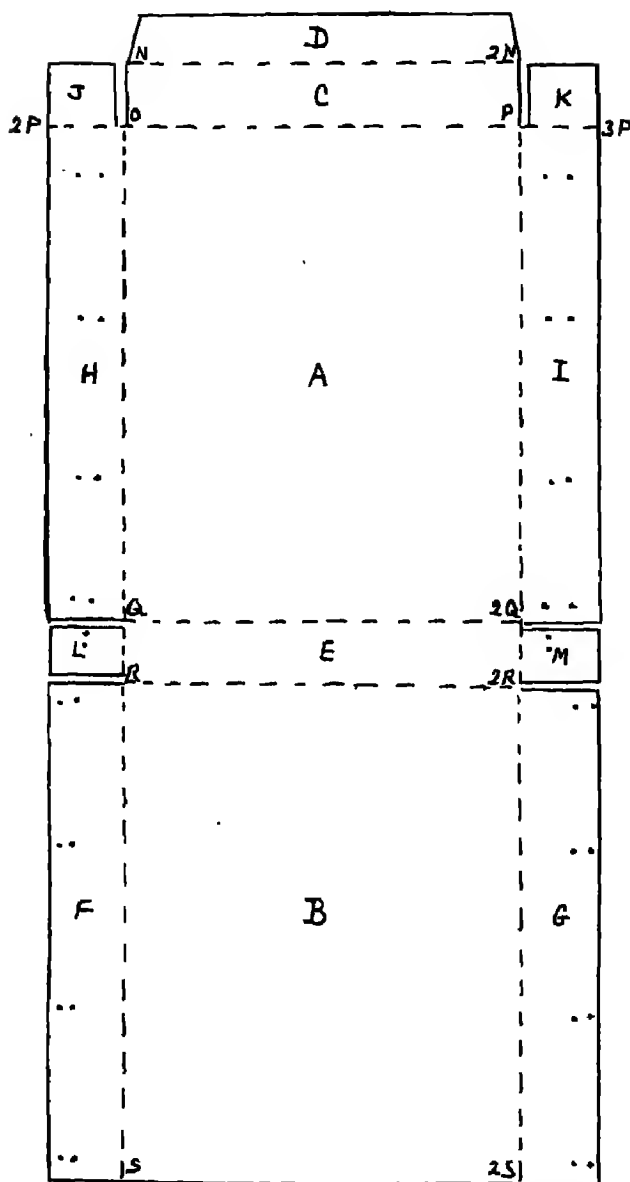


FIG. 139.—STOUT SINGLE-PIECE STAPLED BOOK BOX.

extended to the right and to the left by two small nearly square subsidiary flaps lettered L and M, while the side H is extended in an upward direction by a nearly square subsidiary flap J, and the side I is similarly extended by a flap of approximately the same size and character lettered K. The end C is extended in an upward direction by an end flap D, containing two acute angles and two obtuse angles.

Right-angled bends must be made along the lines N₂N, OP, or more accurately 2P₃P, Q₂Q, R₂R, OS, and P₂S. To liberate the various parts cuts are made terminating at O and P to separate J and K from C, terminating at Q and R to separate L from H and F, and terminating at 2Q and 2R to separate M from I and G. By means of four pairs of wire stitches shown by the dots thereon, H and I are firmly attached to F and G, while L is attached to both H and F by means of the lowest wire stitch on H, and M is attached to both I and G by means of the lowest wire stitch on I. These wire stitches are of stout material, and are really staples. They are generally made from a rustless alloy.

Regarding dimensional data, the length of this box is $10\frac{1}{2}$ inches, its width is 7 ins. only, and its depth is much less, viz., $1\frac{1}{2}$ ins. The total weight uncharged, without the staples, is $7\frac{1}{2}$ ozs., while box makers should note that it is not usually demanded either paper-covered or printed on any portion.

Fig. 140 illustrates a carton widely employed for the packing and distribution of electric lamp bulbs. In this sketch A is the front, B is the back, C and D are the two sides, F is the top, G is the top flap, H and L are two top subsidiary flaps, and E is the attachment flap, which is heavily covered with adhesive, and then attached to the back of D so that its inner margin OQ corresponds with the outer margin of that side which is lettered T₂T.

In regard to the base, this is rather different from the top. The outer base is shown at J, 2J, the circle round 2J being completely cut out. A pair of subsidiary base flaps is provided at I and M, a portion of each of which is cut out in the form of a tall narrow arch as shown. Finally a base flap is provided at K.

In order to liberate the various parts, cuts must be made along the lines VP, RW, and 2SX. Right-angled bends are then arranged for along the lines N2N, O2P, TS, 2Q2T, U2U, OQ, P2Q, 2PR, and S2S. The whole of the outer surface may or may not be demanded paper-covered, while printing is usually ordered on the outer surface only of the arrowed portions in the direction of the arrows, wording

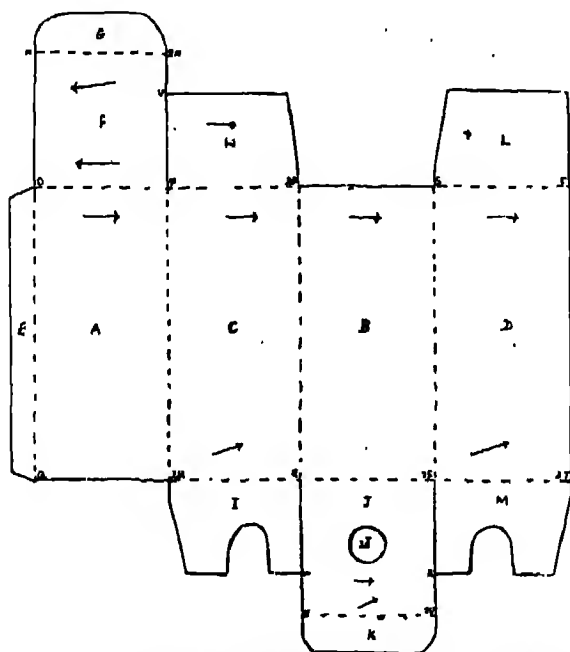


FIG. 140.—SINGLE-PIECE EXAMPLE FROM ELECTRIC LAMP BULB INDUSTRY.

frequently being wanted in more than one direction on individual portions.

Regarding dimensional data, the length of this box, carton or folding packet is $5\frac{1}{2}$ in., taking it as a flat model, otherwise, considering it as an upright example, the depth is $5\frac{1}{2}$ ins. The area of the top or base is $2\frac{1}{2}$ ins. by $2\frac{1}{2}$ ins., *i.e.*, these form perfect squares, while the total weight uncharged is just under 1 oz. Various types of inner attach-

ments are used with these and other electric lamp packets. It is hoped to illustrate some of them in later chapters.

SINGLE-PIECE FOLDING PACKETS FOR TEA AND TOWELS

An unusually interesting single-piece tea packet is sketched out in Fig. 141. In this drawing A is the front, and B is the back, C is one side, D is the other, while E,

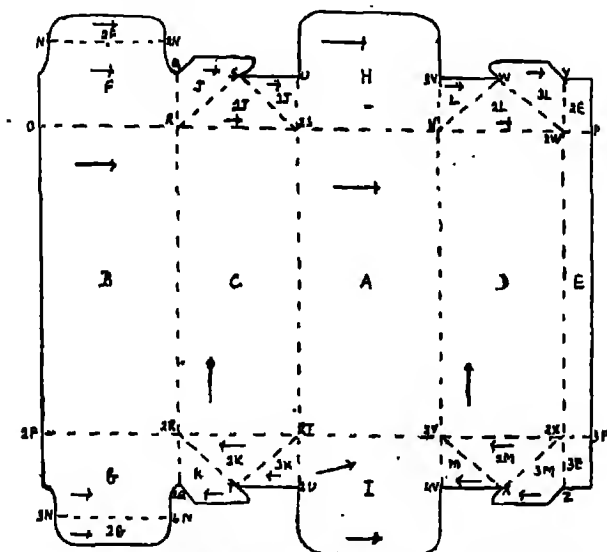


FIG. 141.—SINGLE-PIECE QUARTER-POUND TEA PACKET.

2E, 3E form the triad of attachment flaps, which are heavily covered with adhesive, and then attached by this means to the inner or non-exposed surface of B, F, and G, so that the line P3P disappears completely behind B, and the line 2W2X then corresponds with the line O2P.

The top is made up of many parts. Thus H is the extreme outer top, which is generally attached by a paper seal, not shown in the sketch, to B. F is the main inner top, 2F its flap, and other subsidiary portions of the top which fold in under F are found in J, 2J, 3J, and L, 2L, 3L. A small

portion of the attachment flap, viz., 2E, then becomes a portion of the top, as will be evident when the model is put together.

In regard to the base, this follows a similar plan to the top. Thus I is the outer base, and G is the inner base, but I is attached to G by means of adhesive, instead of by the use of a paper seal. The inner base is extended by a flap 2G, and other flaps which fold inside the carton, *i.e.*, above G, are found in K, 2K, 3K, and M, 2M, 3M. The small portion of the attachment flap lettered 3E then becomes a portion of the base.

Bending is of an elaborate character in the case of this example, both single and double right-angled bends being requisitioned. It will suffice, however, to give a list of the bends, without distinguishing the number of degrees they contain, as the last will be quite evident when the model is put together. Box makers should, therefore, arrange to bend the model along the lines OP, 2P₃P, R₂R, 2S₂T, V₂V, and 2W₂X. Instead of making cuts along the following lines, bends are again made, namely, along QR, 2R₂Q, U₂S, 2T₂U, 3V₂V, 2V₄V, Y₂W, and 2X₂Z. Other bends are also necessary along the lines RS, 2SS, VW, 2WW, 2RT, 2TT, 2VX, and 2XX, while bends which become inactive, *i.e.*, disappear when the model is closed, are made along the lines N₂N and 3N₄N. The whole of the outer surface of this example is usually demanded paper-covered, while printing in two or more colours is usually ordered on the outer surface of those portions carrying arrows, the direction of the print being that of the arrow, while parts carrying two arrows are printed in both directions thereof.

Regarding dimensional data, the depth or height of this interesting example is $4\frac{1}{2}$ ins., its length is 2 ins. only, and its width is rather less, viz., $1\frac{3}{4}$ ins., *i.e.*, the top and base do not in this case form perfect squares. The total weight uncharged is slightly under $\frac{1}{2}$ oz.

Fig. 142 shows a very useful example to take single towels for use in the slot machines provided in hotel toilets and on railway trains.

In this drawing A is the top, B is the base, C is the front, D is the back, and E is the attachment flap, which is lightly covered with adhesive on its outer surface, and then attached to the inner surface of D so that its inner margin OP corresponds with the outer margin line lettered V2V.

The two ends are shown at F and H, while the two main end flaps are shown at G and I. Four subsidiary flaps are provided at J, K, L, and M, while finally two compound

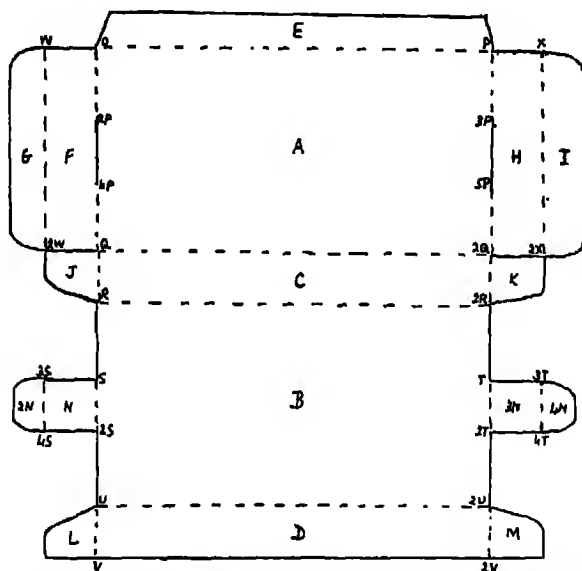


FIG. 142.—SINGLE TOILET TOWEL PACKET FOR SLOT MACHINES.

end closing flaps are provided, one being lettered N, 2N, and the other 3N, 4N.

In order to free the various parts, cuts must be made along the lines 2WQ, 2Q2X, while in order to enable the compound end flaps to function, slits must be made along the lines 2P4P and 3P5P. Right-angled bends are then arranged for along the lines OP, Q2Q, R2R, U2U, W2W, 3S4S, O2P, 4PR, S2S, UV, P3P, 5P2R, T2T, 2U2V, 3T4T, and X2X. The line 3S4S then corresponds with the line 2P4P, while the line 3T4T corresponds with the line 3P5P—

in other words, the nose 2N fits right into the slit 2P4P, and the nose 4N fits right into the slit 3P5P.

Regarding dimensional data, the length of this useful example is $5\frac{3}{4}$ ins., its width is 3 ins. only, and its depth is much less, *e.g.*, $\frac{3}{4}$ in. The total weight uncharged is rather

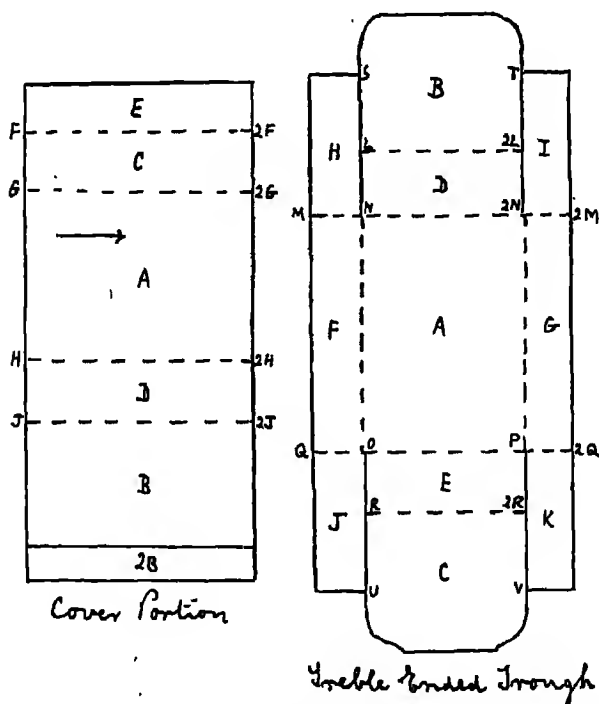


FIG. 143.—TWO-PIECE BOX FOR SALE OF LARGE LIPPED PAPER CLIPS.

under $\frac{1}{2}$ oz. The model may be demanded paper-covered on its entire outer surface, but as a rule carries no print.

TWO-PIECE AND FOUR-PIECE PACKINGS

Several types of boxes for paper fasteners have already been illustrated in this series. Fig. 143 shows, however, an exceptionally useful one.

Taking the cover portion first, A is the top, B, 2B form

the base, D is the front, C is the back, and E is the attachment flap, a portion of which is heavily gummed, and then attached so that it completely conceals the inner surface of 2B.

Right-angled bends are arranged for along the lines F2F, G2G, H2H, and J2J, printing being demanded on the outer surface of A only, and the cover portion not being attached to the trough by any other means except its own grip.

Turning now to the trough, A is its base, F and G are its sides, D and E are its outer ends, B and C are its end flaps which overlap and form a top to the trough, H and I forming a pair of inner ends, while J and K form a second pair. As these pairs overlap to a considerable extent, the major portion of the entire trough end is made up of three thicknesses. These inner ends are usually clipped together by one of the hundred paper fasteners this size hold, J and K being clipped together in a similar manner.

In order to free the various parts, cuts must be made, as will be anticipated, along the lines SN, T2N, OU, and PV. Right-angled bends are then arranged for along the lines L2L, M2M, Q2Q, R2R, and also along the lines NO and 2NP. This portion is not, as a rule, demanded either paper-covered or printed on its outer or inner surface.

Regarding dimensional data, the length of this box is $2\frac{1}{2}$ ins., its width is $2\frac{1}{2}$ ins., and its depth is $\frac{3}{4}$ in. only. The total weight uncharged, taking all portions together, but excluding any end clipping device, is just over $\frac{1}{4}$ oz.

Fig. 144 depicts the example with a three-piece lining referred to in my opening paragraph. Considering the outer portion first, only a very brief description seems to be called for, as this kind of packet has been described frequently. Its parts are made up of a front A, a back B, two sides D and C, an attachment flap E, which is wire-stitched on to D by a quartette of stitches, shown by the four pairs of dots on both; the outer top is shown at F, the outer base at H, the outer top flap at G, and the outer base flap at I, while two inner top flaps are provided at J and L, and two inner base flaps at K and M.

The usual cuts are necessary to liberate the various parts,

along the lines W_2N , XO , zRY , and SZ , after which right-angled bends are arranged for along the lines Q_2Q , NP , RT , U_2U , zN_2R , OS , PT , and V_2V .

Paper covering of a coloured character may be demanded

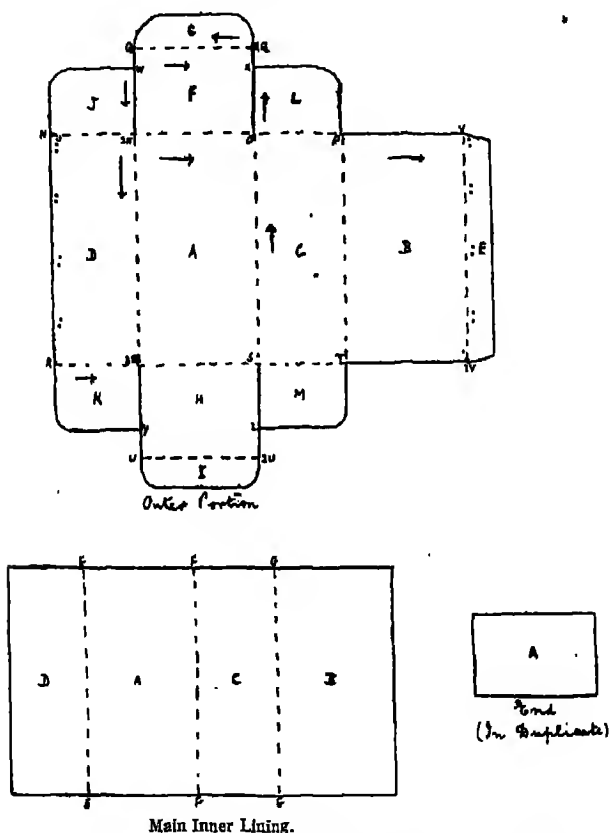


FIG. 144.—FOUR-PIECE PHARMACIST'S DRUG PACKET.

on the entire outer surface of this outer portion and printing may be ordered in several directions, although, as a rule, it is only wanted in one direction per portion, *e.g.*, in the direction of the arrow thereon. No printing is carried on the inner portion of this outer carton, or on either surface of its three-piece lining. Thin non-corrugated board is used

for the outer carton, while corrugated material is employed for the various parts of its lining.

Below the outer carton is sketched out the main inner lining. The front of this is lettered A, the back is lettered B, while its two sides are lettered D and C. Right-angled bends are arranged for along the lines EE, FF, and GG, but D is not attached to B by a glue paper strip or other means, nor is it attached to the inner surface of the outer carton by any other means except its own grip.

Finally, only a word is necessary in regard to the ends of the inner lining, one only of which is shown, although two must obviously be cut out, one for the top and one for the base, while some users specify that four should be provided, *i.e.*, the top and base are then of double thickness. To put the matter in a nutshell, each end consists of a small rectangle of corrugated board without right-angled or other bends. Neither end is attached to the main inner lining by any means, nor is it glued, pinned or stitched to any part of the outer carton. The protection afforded is so substantial that unless this carton is used for liquids, quartettes of ends per carton are quite uncalled for.

Regarding dimensional data, the depth or height of the outer portion of this carton is $4\frac{1}{4}$ ins., its length is $2\frac{1}{4}$ ins., and its width is $1\frac{1}{2}$ ins. only. The total weight uncharged, taking all four portions together, *i.e.*, including two ends instead of only the one sketched out, is approximately $\frac{3}{4}$ oz. or slightly less, from which it follows that even if four ends are demanded, the weight of the packing material will not exceed a full ounce. The depth of the main inner lining measured along the line FF is very slightly less than the depth or height of the main outer portion, and the same remark applies to its length measured along EF, and its width measured along FG. Separate dimensions need not, therefore, be given for these, but, above all, box makers should see that a tight fit is obtained of inner portions with outer portions, whenever cartons or packets with linings are ordered.

CHAPTER XXVI

NOTES have been given in previous chapters concerning one or two boxes and packets required by the electrical trade. I am taking up in the present chapter another example of which long numbers may be called for. These outers are coming more and more into use as substitutes for wooden crates and packing cases, owing to their cheapness, and in many cases they are more attractive in appearance and easier to handle.

In the present chapter another two kinds of cigarette packets are also described and illustrated. Those box-makers whose works are in the vicinity of cake cup factories will be interested in the carton in use in that trade, while other readers who want to cater for packers of suet and shirts should carefully study the last two examples in this chapter.

IMPORTANT LAMP OUTER AND CAKE CUP CARTON

Fig. 145 illustrates an outer which is strongly stapled for use in the lamp or globe branch of the electrical industry. Taking the various parts, A, is the front and B is the back, C and D, 2D being the sides, and E the attachment flap, which is stapled five times on to the inner surface of 2D as shown by the quintet of pairs of dots on each. The top is made up of many parts, L, 2L forming one inner flap, J another, while H forms an intermediate flap overlapping these, and F in some examples forms the extreme outer top flap, which slightly overlaps H, and in other instances forms the complement of the top without any overlap. The base flaps M, 2M, I, K, and G are identical in character with those of the top.

As will be seen from the drawing, cuts or slits are made terminating at O, Q, R, to separate F from J, J from H, and H from L, while similar slits terminating at P, 2Q, and 2R

must be made to separate G from K, K from I, and I from M. Right-angled bends are then arranged for along the lines NS, 2NzS, N2N, OP, Q2Q, R2R.

The whole of the outer surface of this box is paper-covered except for the narrow strip 2L, 2D, 2M. Printing is generally demanded on the outer surface of those portions arrowed, the direction of the print being that of the arrows.

Regarding dimensional data, the length of this box is 12 inches, its width is 9 inches, and its depth is 7 inches; or, considered as an upright example, its height is 12 inches, the width of the front is 9 inches, and the width of the side

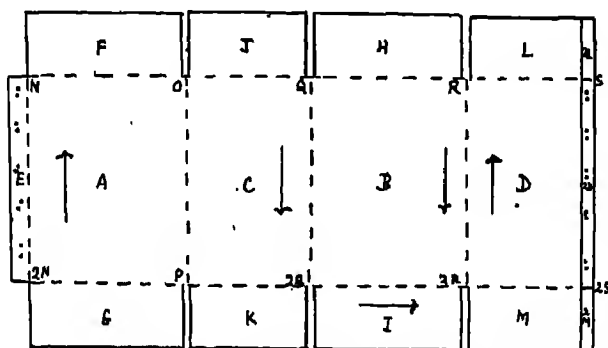


FIG. 145.—SINGLE-PIECE STAPLED OUTER FOR ELECTRIC LAMP INDUSTRY.

is 7 inches. The total weight uncharged is 14 ounces approximately.

Fig. 146 shows an attractive carton carrying a window, for the sale of paper cake cups. Taking the various parts, the front is made up of A, 2A, the shaded portion 2A being completely cut out, and a sheet of transparent stoutish paper being pasted on instead. The back of the carton is found at B, its two sides are shown at C and D, while E is the attachment flap, which is lightly covered partially or wholly with adhesive, and then attached to the back of B so that its inner margin S2S corresponds with the outer margin of B lettered N2N.

The top is made up of four parts. As box-makers will gather, the dually-nosed flap F forms the extreme outer top,

while the dually-slitted flap H comes next, and under these come J and L. The shape of the slits W and X should be carefully noted, as the noses of F must fit neatly into them. The base flaps are similar in character to the top, and are made up of G, I, K, and M. The shape of the slits Y and Z is the same as W and X, but the directions in which they are cut are different.

With regard to bending, right-angled bends are obviously required along the lines NS and 2N2S. Shorter but still right-angled bends must be made along the lines OP, Q2Q, R2R, and S2S. To liberate all the flaps knife cuts must be

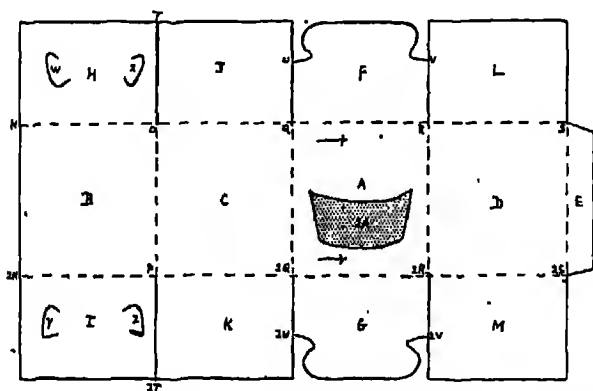


FIG. 146.—SINGLE-PIECE "WINDOW" CARTON OF CAKE CUP TRADE.

made along the lines TO, UQ, and VR in the case of the top, and P2T, 2Q2U, and 2R2V in the case of the base. Paper covering may be demanded over the entire outer surface of the carton, excluding the cut-out window portion, while printing is usually limited to the outer surface of A, above and below the window, the direction of the print being that of the two arrows.

Regarding dimensional data, the length of this carton, or rather the length of its front, is the same as the width of its side, *i.e.*, each make $2\frac{1}{2}$ inches. The depth or height is slightly more, *viz.*, $2\frac{3}{4}$ inches, while the total weight uncharged, including the transparent window, is half an ounce approximately.

TWO TOBACCO TRADE DUAL-PIECE PACKETS

Fig. 147 shows a two-piece cigarette packet, which is widely used at the present time.

Taking the lid or cover first, A is its top and B is its base, C is one end, D is the other, E is the unglued portion of the

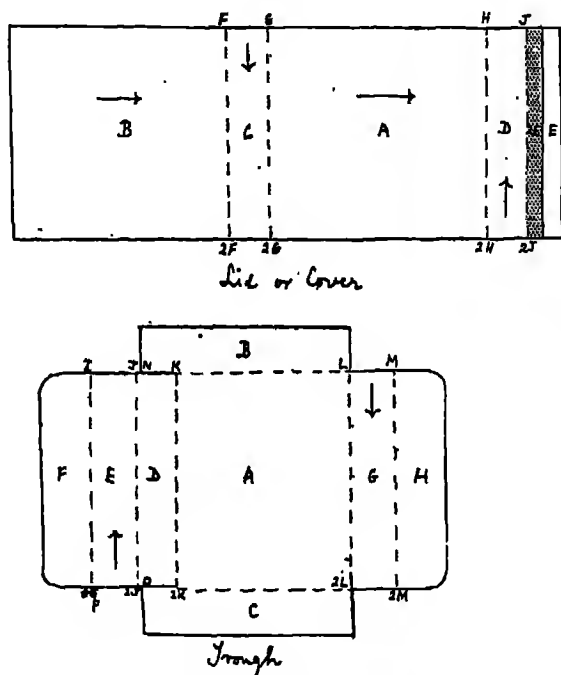


FIG. 147.—DOUBLE BENDING CIGARETTE PACKET.

attachment flap, and 2E is the narrow glued strip, which always occurs on the outer surface.

Right-angled bends are required along the lines F2F, G2G, H2H, and J2J. Printing is demanded on the outer surface of the lid or cover mainly in the direction of the arrows thereon, but this, of course, is subject to considerable variation with different cigarette packers. The lid or cover is not attached to the trough by any other means except its own grip.

Turning now to the trough, the base is made up of A plus

D, the trough front and back are made up of E and G, while the trough sides are found in B and C. This trough has two flaps shown at F and H, which fold over and are held in place by the lid or cover.

A pair of slits must next be made in order to free D from A. These are required, as will be expected, along the lines NK and OzK. Right-angled bends are then arranged for along the lines IP, J₂J, K₂K, L₂L, M₂M, KL, and zKzL. The bend along K₂K is of a different character from the others, *i.e.*, it is made to form a right angle with the under surface of the trough base, instead of with its upper or inner surface.

Both the trough and the lid or cover may be demanded paper-covered on their entire outer or exposed surfaces, while printing in the case of the trough is usually limited to a few lines on the outer exposed surfaces of E and G in the direction of the arrows.

Regarding dimensional data, the length of this packet is $3\frac{1}{8}$ inches, while its width is slightly less, *viz.*, 3 inches, *i.e.*, it does not form a perfect square. The depth is $\frac{5}{8}$ of an inch only, while the total weight uncharged, taking both portions together, is half an ounce approximately.

In Fig. 148 we have another type of cigarette packet possessing right-angled bends in two directions. Taking the cover first, A is its top or main top, as the subsidiary strips 2A and 3A form part of the top, these being the paper margins on the under surface thereof. The base is made up of B, 2B, 3B, a similar remark applying to the under surface paper margin, while C is one side and D is the other. No card attachment flap is shown in this instance, as it is substituted by a paper slip which covers D to nearly half its width, and which attaches D to B in much the same manner that corner slips are put on to the troughs of fancy goods boxes.

Right-angled bends are arranged for along the lines EE, FF, and GG, while printing is as a rule demanded in the direction of the arrows on the paper-covered outer surface of the cover, the direction, however, of the lettering being subject to some variation according to the requirements of the different cigarette packing houses.

Turning next to the trough, the main base is shown at A, but the whole base is made up of A plus D. One end is shown at E, which is extended by an end flap F, folding over to form part of the top of the trough, while G is the other end, and this is extended by a much larger flap H, which also folds over to form part of the top of the trough.

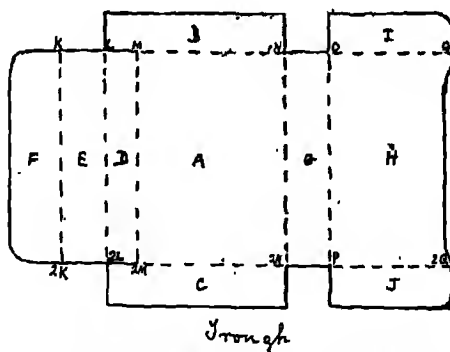
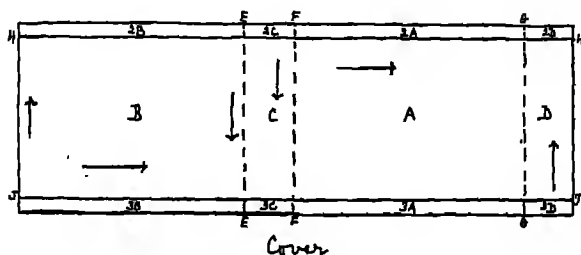


FIG. 148.—ANOTHER EXAMPLE OF DOUBLE BENDING CIGARETTE PACKET.

Some readers may prefer to call E and G the front and back of the trough respectively, in which case B forms one inner side and C the other, while I and J form the outer sides of the trough. To free the base strip D, cuts are required along the lines LM and 2L2M, after which right-angled bends must be arranged for along the lines K2K, L2L, M2M, N2N, OP, MN, OQ, 2M2N, and P2Q. The bend M2M is made in the opposite direction to the others, *i.e.*, so that the

strip D will fall downwards when the trough is pulled partially out of its lid or cover.

Regarding dimensional data, the length of this packet is $3\frac{1}{2}$ inches, while its width is substantially less, viz., $2\frac{1}{8}$ inches. The depth is $\frac{3}{4}$ of an inch only, and the total weight uncharged, taking both portions together, is approximately $\frac{3}{4}$ of an ounce, this including paper covering.

PACKINGS FOR SUET AND SHIRTS

Box-makers will hardly expect that suet and shirts are packed in the same class of container. Shirt boxes are, as a

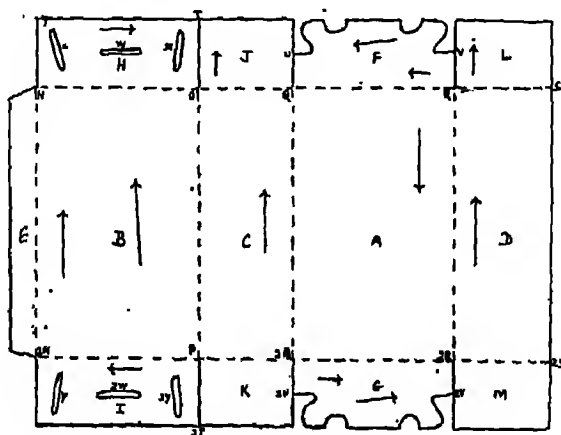


FIG. 149.—SINGLE-PIECE CARTON FOR SALE OF SHREDDED SUET.

matter of fact, entirely unsuitable for the packing of food-stuffs of any kind. Distinct examples will, therefore, be discussed of each.

Fig. 149 shows a single-piece packet which is proving very popular for the sale of suet. Taking the various parts, A is the front and B is the back, C is one side, D is the other, and E is the attachment flap, which is lightly covered partially or wholly with adhesive on its outer surface, and then attached to the back of D, so that its inner margin N2N corresponds with the outer margin line lettered S2S.

The top and base are each made up of four parts. Thus the main or extreme outer top is shown at F, while the

extreme outer base is shown at G. The shapes of these two should be specially noted, as they are of great importance. The intermediate top flap is shown at H, while the intermediate base flap is shown at I. The first bears three definite cut-out slits lettered X, W, and 2X, while the second bears three similar slits, two of which, however, are cut out in a different direction, lettered Y, 2W, 2Y. Subsidiary top flaps are found in J and L, and subsidiary base flaps in K and M. The three noses of F fit into the three slits of H, and the three noses of G fit into the three slits of I.

To liberate the various parts, cuts must be made along the lines TO, UQ, VR, P2T, 2Q2U, and 2R2V.

Right-angled bends are then arranged for along the long lines NS, 2N2S, and along the shorter lines N2N, OP, Q2Q, and R2R.

In regard to finishing this extremely interesting example, a paper covering may be demanded on the entire outer surface, and also on the inner surface. Printing is usually limited to the outer surface, and is found on the parts bearing arrows, the direction of the print being in the main that of the arrows, although some examples carry print in numerous other directions. Printing may also be demanded in several colours, but embossed lettering is not as a rule required.

Regarding dimensional data, the height or length of this example is 5 inches exactly. The width of its front is 3 inches, and the depth of its side, the last being measured along the line P2Q is $1\frac{3}{4}$ inches. The total weight uncharged is half an ounce.

Fig. 150 illustrates an interesting type of paper-frilled shirt box.

Taking the lid or cover first, A is its top, C is one end, B, 2B, 3B is the other end, D is the lid back, and E is the lid front. Right-angled bends are arranged for along the lines FF, FG, GG, and GF, while a paper covering is usually demanded over the entire outer lid surface, with edged margins of a distinct colour.

With regard to the joining of the corners, heavily glued textile strips are used instead of paper strips. Two of these

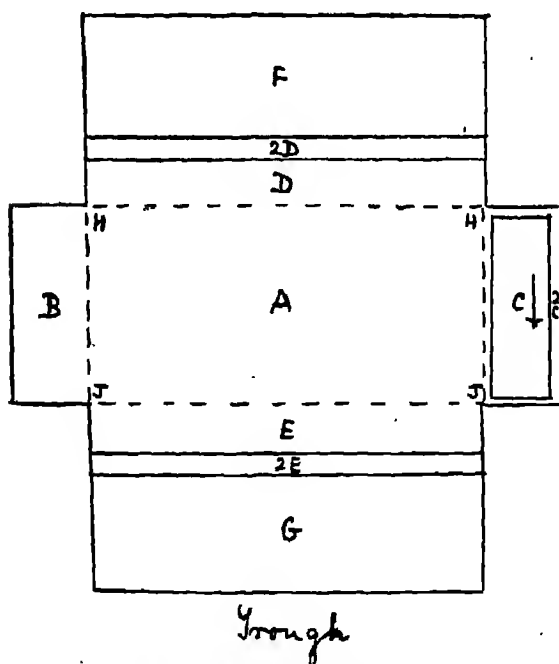
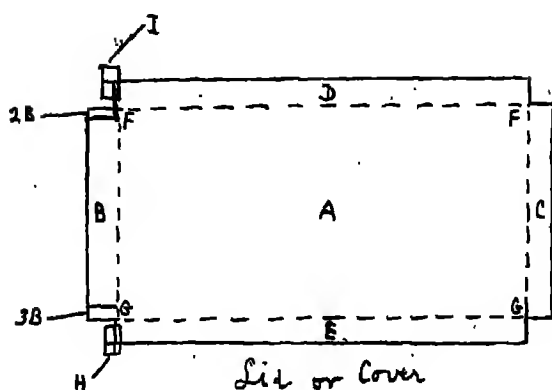


FIG. 150.—TWO-PIECE PAPER FRILLED SHIRT BOX.

are sketched out at I and H, in the position they occupy when the lid is laid flat, *i.e.*, before making up. After folding

has been done a portion of each of these flaps is attached to and completely conceals 2B and 3B, after which the upward exposed portion of I, and the downward exposed portion of H fold over, and adhere to the inner surface of D and B, and B and E, the other two corners being joined in a similar manner. Readers may remember that a somewhat similar case has already been described and lettered in greater detail.

Turning now to the trough, A is its base, B forms one end, C, 2C forms the other end, C being the printing area or label area, carrying lettering in the direction of the arrow thereon. The trough back and front are made up of D, 2D, and E, 2E, the narrow strips bearing the numeral as well as the letter being the inner margins of the extra wide paper frills, which are, as will be guessed, made up of F, 2D, and 2E, G. The ends carry no paper frills, but the base sometimes is provided with holes for the insertion of tapes. These, however, are not shown in the present sketch.

Right-angled bends must be made, as readers will anticipate, along the lines HH, HJ, JJ, and JH. The corners are joined by textile strips fully an inch in their width, and of the depth of the trough. These are heavily gummed, and attached without the compound overlap referred to in the case of the lid or cover.

In regard to finishing, the paper frills are usually made of rather stout creamy-white material, and carry no print. The trough itself is paper-covered on its entire outer surface, but cheap material of a buff colour is used for the base A. The example before me carries no advertising matter on its frills, but in some instances box-makers will be required to print these papers on one or both sides.

Regarding dimensional data, the length of this box is no less than 17 inches, while its width is exactly half, viz., 8½ inches; the depth is 3½ inches only, while the total weight uncharged, taking lid and cover together, and including all frills and textile corner pieces, is 14 ounces approximately.

In the next chapter a further six very widely employed and exceptionally interesting examples will be taken up for discussion and illustration. I hope to return to the question of partitioned boxes, and give some further types

of these, as there is a big market for them. A large number of compartment boxes of many types are manufactured on the Continent for foreign-made toys and fancy goods. British box-makers can, however, in my opinion, easily produce them in long numbers at competitive prices, and ought, therefore, to push the sale of such in Europe, as their American *confrères* are doing in Canada and South America.

CHAPTER XXVII

Box and packet producers do not make as much as they should out of the well-known trade fact that novel and attractive containers are of great assistance in selling even the cheapest classes of goods. First-class salesmen are very difficult to get, and are expensive to pay. Attractive boxes can, as a rule, however, be produced cheaply in large numbers, and, though these cannot actually converse with prospective customers, they prove first-rate salesmen by the attention they attract, a customer seeing one novelty frequently passing along a counter to see if he can also get something else.

Several of the following models in this chapter, owing to their novel shape or character, are already proving very valuable goods' salesmen, and in future chapters it is my intention to comment upon others to which a similar remark applies.

INTERESTING MODELS FOR SOAP AND EGGS

Fig. 151 illustrates a counter display box taking a trio of packets of soap. Its base is made up of C, 2C, 3C, the lines W2W and X2X showing the size and direction of the packets, but not being partitions.

The back is shown at G, the back flap at H, this being glued on to a strip of the lid lettered 2D. The whole lid is made up of D, 2D, the outer front of F, the inner front of 2B, and the under lid of a quartette of triangles lettered 5B, 7B, 8B, and 6B respectively. The card is completely cut out of the portions lettered B and 2H, in addition to which cuts or slits must be made along the lines 5PP, R5R, 2N3N, 2Q3Q, 3R2R, and 3P2P. Short cuts are also necessary along the lines 4P2P, and 4R2R.

The ends are compound, and their character should be carefully noted. At the right-hand extremity the actual outer end is made up of K, this being extended by an end

behind it. Single right-angled bends are required along the lines M₂M, N₃N, S₃P, Q₃Q, 2S₃R, 3M₄M, TV, 2T₄V, N₂N, Q₂Q, PR, S₂S, T₂T, V₂V, and 4V₃V. Adhesive is only used on the attachment strip H, and is applied to its under surface. Printing is demanded on the outer surface of C, 2C, and 3C, and on the inner surface of D, the direction being that of the arrows thereon.

Regarding dimensional data, the length of this box is 7 inches, its width is $3\frac{1}{2}$ inches, and its depth is $1\frac{1}{4}$ inches. The total weight uncharged is just under 1 ounce.

Fig. 152 shows a folding egg box which takes a dozen eggs. Though it is fitted with partitions sufficient to divide it up into twelve compartments, it is drawn without these, as the partitions are very similar to those sketched out in Fig. 156 at the end of this chapter.

Taking the various parts, B is the lid, G is the lid flap, F is the back, C is the base, and D is the front. As will be seen, the front is extended to the right and to the left by two curiously shaped pointed flaps lettered 2K and K. The base is extended also in both directions by rectangular slitted flaps J and 2J, the slits being slightly curved, and being denoted by S₂S and T₂T. The back is also extended in both directions, the shape of the flaps being similar to those of D, but the direction different, and the lettering L, 2L. Finally, the lid is also extended to the left and right by a pair of curiously shaped flaps lettered H and 2H.

As to bends, full right angles are made along the lines MR, and 2M₂R, as well as along the much shorter lines N₂N, P₂P, Q₂Q, and R₂R. To put this model together, the noses of the four flaps K, 2K, L, 2L are first of all slipped into the slits S₂S and T₂T, the lid flap H then being slipped over them and into S₂S, while the lid flap 2H is slipped over the other pair into T₂T. Printing is usually limited to the outer surface of B and G, and no paper covering on any surface is generally demanded.

Regarding dimensional data, the length of this box is 7 inches, its width is $5\frac{1}{4}$ inches, and its depth is $2\frac{3}{8}$ inches. The total weight uncharged, without partition strips, is just under $1\frac{1}{4}$ ounces.

A PAIR OF INDIARUBBER BAND BOXES

Eight-sided boxes which do not form perfect octagons are not very often met with. One of these is shown in Fig. 153, and already enjoys a huge sale.

Taking the lid first, the lid top is formed of B, the lid

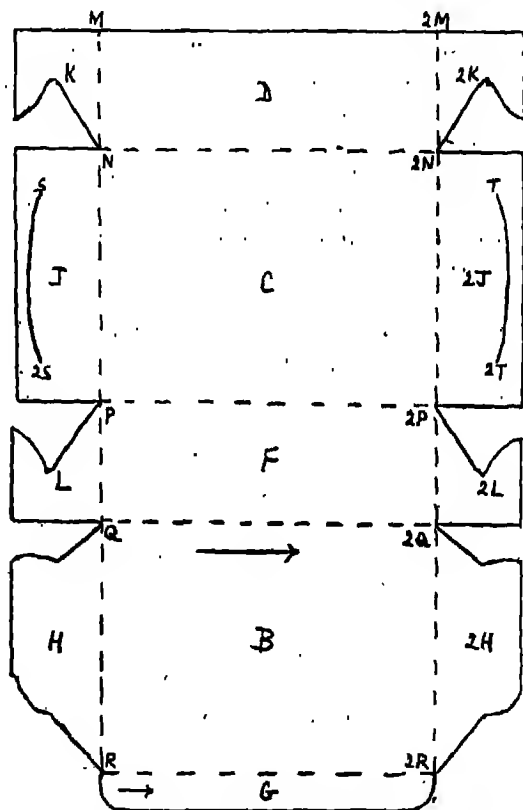


FIG. 152.—USEFUL SINGLE DOZEN FOLDING EGG BOX.

front of C, the lid back of D, the main lid ends of F and G, and the subsidiary lid ends or side extension pieces of H, J, K, and L respectively. It should be noted in the case of the lid that thumbholes are cut out in its front and back, as shown at Q and W.

Regarding bends, these must be made along the lines

M₂M, N₂N, P₂P, R₂R, S₂S, T₂T, and V₂V. As will be evident from the shape of the lid, they are obtuse angles and not right angles. It should be noted that H is attached to C by means of a heavily gummed paper slip not shown in the drawing, and an obtuse-angled bend is then made in the centre of this, forming the corner X.

The lid top is shown joined to C, or rather separated therefrom by a bend 2VX. This join and other similar joins along the remaining seven edges are effected by means

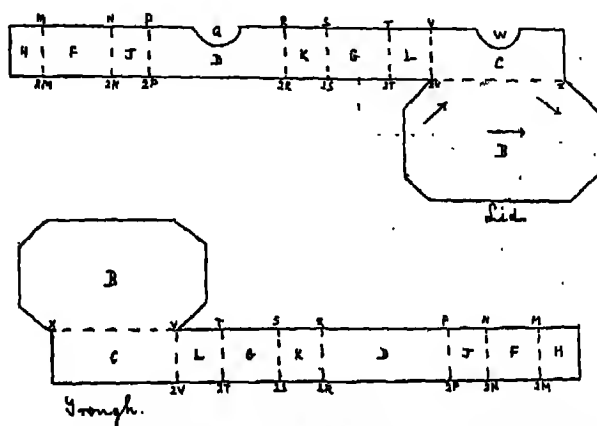


FIG. 153.—EIGHT-SIDED BOX FOR ASSORTED INDIARUBBER BANDS.

of the outer surface paper covering. In this instance a full right-angled bend is required along the line 2VX, and along the other seven edges.

Regarding the trough which is sketched out separately, it is made a shade smaller than the lid or cover, and carries in its front and back no thumbholes. Otherwise, however, it is very similar in character, and hence a detailed description is hardly called for. Right-angled bends must be made along XV, and the other seven edges, while obtuse-angled bends are necessary along the lines V₂V, T₂T, S₂S, R₂R, P₂P, N₂N, and M₂M, which divide the lid strip into the eight portions C, L, G, K, D, J, F, and H. The entire outer surface of the trough again is paper-covered, but as a rule carries no print.

Regarding dimensional data, the maximum length of this interesting example is $3\frac{3}{8}$ inches, the minimum length thereof being $2\frac{1}{4}$ inches. The maximum width is $2\frac{1}{8}$ inches, while the minimum width is 1 inch. The depth is 1 inch exactly, and the total weight uncharged, taking lid and trough together, is slightly under three quarters of an ounce.

In addition to being sold in eight-sided boxes, india-rubber bands are also marketed in two-piece semi-triangular types of containers, one of which is next illustrated, and is sketched out in Fig. 154.

Taking the lid first, the lid top consists of B, and carries

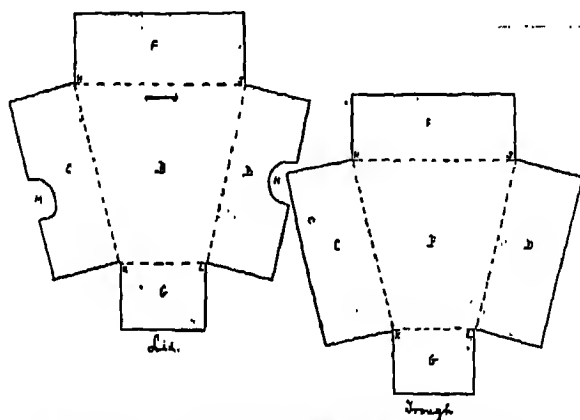


FIG. 154.—SMALL SEMI-TRIANGLE BOX FOR SALE OF INDIA-RUBBER BANDS.

print on its outer surface in the direction of the arrow, or upon a paper covering attached thereto. The wide lid back is shown at F, the narrow lid front is shown at G, while the two equal-sized lid sides are shown at C and D, each carrying a thumbhole lettered M and N in order to facilitate opening.

Assuming that the lid is made in one piece as shown, although in large examples it is frequently made in five pieces, right-angled bends are required along the lines HJ, JL, LK, and KH. The corners are joined by the outer surface paper covering, of which there is quite a substantial turned-over inner margin.

Regarding the trough, this resembles the lid, except that

it is a shade smaller, and is attached thereto by its own grip. The trough sides C and D carry no thumbholes, while the trough base B carries no print. Like the lid, the trough is paper-covered over its entire outer surface, and right-angled bends are required along the lines HJ, JL, LK, and KH.

Regarding dimensional data, the length of this box is $2\frac{3}{8}$ inches, its maximum width is $2\frac{1}{4}$ inches, while the minimum width, *i.e.*, that of the front, is $1\frac{1}{4}$ inches. The depth is 1 inch only, and the total weight uncharged, taking lid and trough together, is approximately half an ounce.

THREE-PIECE AND SIX-PIECE EXAMPLES

Fig. 155 illustrates another packet with a cut-out window. Taking the cover first, its front is made up of 2B, the shaded portion B being completely cut out, and not covered with transparent paper or other material. The back is shown at C, and the two sides at D and F. D is attached to C by the outer surface paper covering, and not by any specially applied paper corner piece.

Right-angled bends are required, as will be anticipated, along the lines G2G, H2H, and J2J, while printing is demanded in the several directions shown by the arrows on the upper and lower portions of 2B.

Taking the main trough next, its base is made up of B, 2B, one end is made up of F and the other of G, and one side is made up of C, 2C, and the other of D, 2D. Right-angled bends are required along the lines HJ, JL, LK, and KH, while the corners again are joined by the outer surface paper covering, which, however, does not completely conceal the trough base B, 2B, but leaves quite a large rectangle of exposed strawboard thereon.

Regarding the trough tray, of which an individual drawing is also given, this is always employed in an inverted state, and B, therefore, forms its top and not its base. The ends of the tray are shown at C and D, while its two sides are shown at F and G. Right-angled bends are required along the lines HJ, JL, LK, and KH, the corners again being joined by outer surface paper covering, which in this

instance extends well over the inner surface of the ends and sides.

Printing is demanded on the outer surface of the trough tray top in several unanticipated directions, as shown by the three arrows thereon. Glue is then applied to the

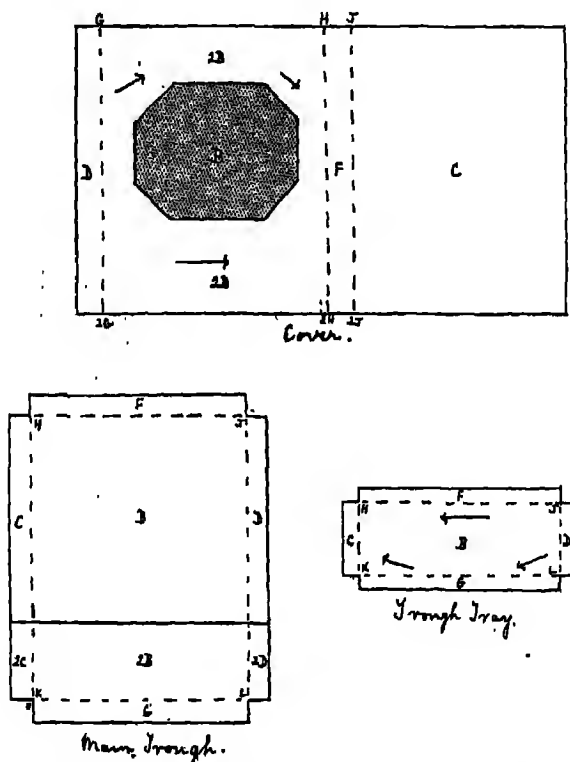


FIG. 155.—THREE-PIECE WINDOW PACKET FOR SALE OF SMALL COLOURED PENCILS.

outer surface of the trough tray strip G, and this is attached to the inner surface of the strip G of the main trough. In a similar way C of the trough tray is attached to 2C of the main trough, and D of the trough tray is attached to 2D of the main trough.

The made-up trough with its inverted tray is then slipped into the folded cover, but is not as a rule attached thereto.

by any other means except its own grip, although occasionally a rubber band is put round.

Regarding dimensional data, the length of this example is 5 inches, its width is $3\frac{3}{4}$ inches, and its depth is half an inch only. The total weight uncharged, taking all three portions together, is just under an ounce.

Fig. 156 shows a partitioned box of the toy trade, made in six pieces. Readers should, however, note that occasionally in small examples, and very frequently in large ones, this

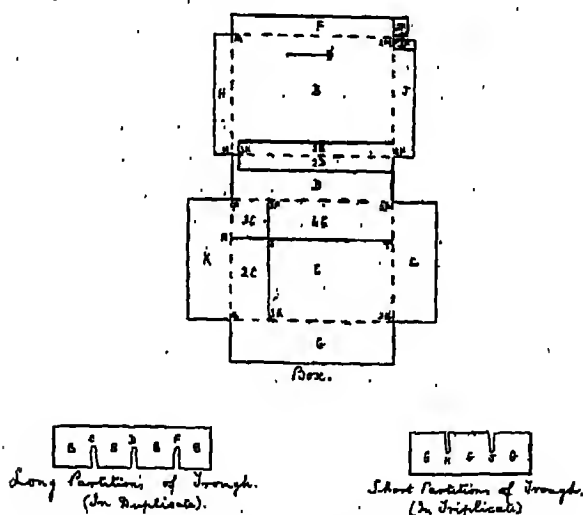


FIG. 156.—SIX-PIECE TOY TRADER'S SINGLE-DOZEN GOLF BALL BOX.

six-piece model becomes a seven-piece one, the lid being cut out separately, and the top marginal edge of the trough of the box then being the line N2N.

Assuming, however, that it is decided to cut out the box with its trough and lid in one piece, the lid top consists of B plus 2B, and carries print in the direction of the arrow on its *inner* surface. The lid front is shown at F, and one corner piece consisting of stout heavily gummed paper is shown at 2F, this being folded on to and completely concealing 3F, which, plus J, makes up one of the lid ends, while H makes up the other. The corner M of the lid is

joined in a similar manner to the corner 2M, but the corners N and 2N carry no such gummed slips.

The back of the trough is shown at D, 2D, its ends are lettered K and L, its front is lettered G, and its base is made up of C, 2C, 3C, and 4C. The junction of the lid and trough back is fortified on the inner surface by a whitish strip of textile fabric, lettered 2B, 2D, while paper corner slips are used for attaching K to D, and L to D, 2D, also K to G, and L to G.

Regarding bends, these consist of full right angles and must be made along the lines M2M, 2N3N, N3N, P2P, Q2Q, MN, 2M2N, PQ, and 2P2Q. Excepting for a rectangle on the base of the box, the whole of the outer surface is usually demanded paper-covered, but unprinted.

In regard to the partitions of the trough of this box, these are of two kinds, *i.e.*, long and short, specimens of each being sketched out individually. Three short partitions and two long ones are required for each box, the long ones being cut in three places, in an upward direction, terminating at C, D, and F, while the short ones are cut in two places, terminating in a downward direction at H and J.

The approximate position of one of the long partitions is shown in the box base by the line RT, while the approximate position of one of the short partitions is shown similarly by the line 3P3Q, the point of intersection being S. The partitions are not, however, attached to the trough of the box by any other means except their own grip. Usually they are paper-covered on one surface, but carry no print of any kind on either surface.

Regarding dimensional data, the length of this example is $6\frac{1}{4}$ inches, its width is 5 inches, and its depth is $1\frac{1}{4}$ inches. The total weight uncharged, taking all portions together, *i.e.*, including the five partitions, is $2\frac{1}{2}$ ounces only, and hence, as readers will anticipate, light-weight strawboard is mainly favoured for the box itself, while thin light paperboard serves for the partition strips.

In the next chapter a number of other very interesting models will be taken up for description and illustration. There are still many trades to be covered, while trades

which have already been referred to are continually on the look-out for novel types of containers. With strawboard, fibreboard and paperboard more and more taking the place of wood and metal for the packing of merchandise of every description, the outlook is a bright and encouraging one. Trade depression ought, in fact, very soon in every up-to-date English boxmaking establishment to be quite unheard of, as it is in similar works elsewhere.

CHAPTER XXVIII

NUMEROUS type of postal cartons are coming more and more into use, especially for pots, jars, etc., of semi-liquid substances, *e.g.*, office paste, more or less pulverulent materials, as some pharmaceutical products, and grocery articles, *e.g.*, tea. It seems desirable in the present chapter to describe and illustrate two actually used examples, and in future chapters I shall hope to mention how some others are manufactured.

In most instances these postal cartons are very cheap to produce, being comparatively simple in design, and either unprinted or containing a moderate amount of regular wording. While very thick material is sometimes employed, this is by no means always the case, as will be evident by comparing the weights of the two models below. Corrugated strawboard is greatly favoured for the larger types of unprinted postal cartons, while paper-covered fibreboard or actual paperboard is generally suitable for the smaller types.

A PAIR OF USEFUL POSTAL CARTONS

Fig. 157 illustrates a very useful and widely employed type of postal carton, in this instance emanating from the office paste industry, although the model with small variations is employed in other directions also.

Taking the various parts, A is the front, B, 2B forms the back, C forms one side, D forms the other, and E forms a portion of the attachment flap, which is wire-stitched on to 2B as is shown by the two pairs of holes on each.

The top is compound, as will be anticipated from the drawing. Thus H and J form the inner top flaps, K is wire-stitched on to 3G, as shown by the single pair of wire-stitch holes on each, and then G, plus 3G, plus F forms the

outer top. The edges of the flap F just meet those of the other.

In a similar manner it may be said that the base is compound 2K being wire-stitched on to 4G, as shown by the single pair of wire-stitch holes on each, 2H and 2J forming the inner base flaps, and 2F, plus 2G, plus 4G forming the outer base, the edges of 2F just meeting those of 2G and 4G.

In order to liberate all these parts, various cuts must be made, as box-makers will expect. These are required along the lines RM, 2M2R, SN, 2N2S, TP, 2P2T, and UQ, also



FIG. 157.—SINGLE-PIECE POSTAL CARTON FOR OFFICE PASTE.

2Q2U. Right-angled bends are then arranged for along the long lines L2L and 3L4L, and also along the shorter lines M2M, N2N, P2P, and Q2Q. Owing to the stoutness of this corrugated board these bends are usually made in two portions, *i.e.*, one bend is 45 degrees and the other is also 45 degrees.

Regarding the finishing of this interesting carton, a paper covering of cheap buff material is usually demanded over the entire outer and inner surface, but no printing of any kind on any surface is usually ordered, and no sealing device is supplied. With regard to dimensional data, the total length and width are $3\frac{1}{2}$ inches each, *i.e.*, the top and base form perfect squares, and the depth or height is $5\frac{1}{2}$ inches. The total weight uncharged is $2\frac{3}{4}$ ounces.

Turning next to a tea carton for postal work, in which quarter-pound packets of tea can be safely transmitted, this is sketched out in Fig. 158.

Taking the various parts, and considering this as a flat model in which it usually occurs, A is the top, B is the base, D is the front, C is the back, and E, plus K and 2K form the triad of attachment flaps, which adhere by means

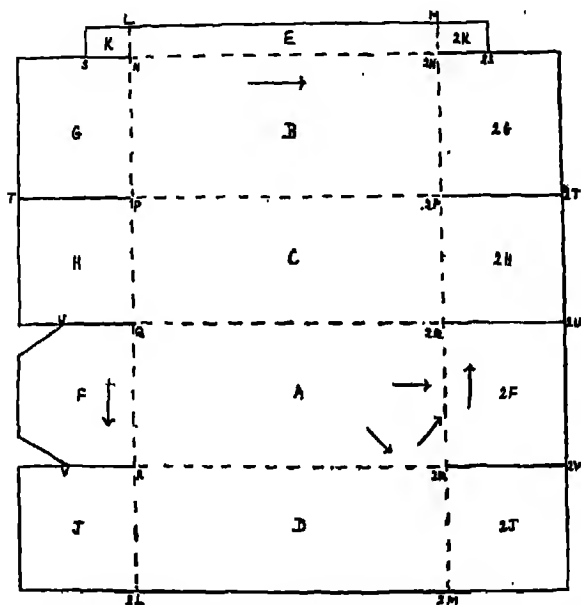


FIG. 158.—SINGLE-PIECE OUTER POSTAL CARTON FOR TEA TRADE.

of glue on their outer surface to the inner surface of J, to the inner surface of D, and to the inner surface of 2J, or more shortly so that the line N2N corresponds with the line 2L2M.

The ends are compound, but not identical, *i.e.*, one differs from the other, as will be evident from the drawing. Taking the left-hand end first, H and J form the inner end flaps, G with K attached to its inner surface forms an intermediate flap, and F forms the extreme top flap. In the case of the right-hand end, 2H and 2J form the inner end

flaps, 2G forms the intermediate end flap, and 2F forms the extreme outer end flap.

To liberate all these varying sized portions, cuts must be made, as box-makers will expect, along the lines SN, 2N2S, TP, 2P2T, UQ, 2Q2U, VR, and 2R2V. Right-angled bends are then arranged for along the long lines L2L and M2M, and also along the quartette of shorter lines lettered N2N, P2P, Q2Q, and R2R.

As to finishing this outer postal carton, a paper covering of white material is usually demanded on the entire outer surface. Printing is demanded on the outer surface of F, B, A, and 2F, the direction of the print being that of the arrow or arrows in each case, while A frequently is provided with a special printing area not shown in this sketch. Adhesive is necessary as already indicated on K, E, and 2K. It must also be applied to the inner surface of F, and to the outer surface of 2G.

Regarding dimensional data, the length of this carton is 5 inches exactly, its width is $2\frac{1}{2}$ inches, and its depth is $1\frac{1}{4}$ inches only. The total weight uncharged is half an ounce approximately.

INTERESTING DENTAL AND MATCH INDUSTRY EXAMPLES

While the dentist is not as big a customer of the cardboard box industry as, say, the confectioner, no container manufacturer can afford to overlook his requirements in this direction, and it will be useful, therefore, to describe and illustrate a carton designed to carry dentists' impression trays. This is sketched out in Fig. 159.

Taking the various parts, and again considering this as a flat model, in which form it most usually occurs, A is the top, D is the front, C is the back, B is the base, and E is the attachment flap, which is partially or wholly covered with adhesive, and then attached to the inner surface of D, so that its inner margin M2M corresponds with the outer marginal line lettered V2V.

As box-makers will anticipate, H plus 2H forms one end, and J forms one end flap, while F plus 2F forms the other

end, and G forms the other main end flap. The rectangles 2H and 2F are special printing areas or label areas, carrying lettering in the direction of the arrows thereon. A quartette of smaller angular flaps lettered K, 2K, L, and 2L, complete the equipment of this useful example.

As box-making firms will again anticipate, these last flaps, or rather three of them, must be freed by making cuts along the lines 2NT, 2TP, and UQ. Right-angled bends are then arranged for along the lines M2M, M2N, P2P, Q2Q, S2S,

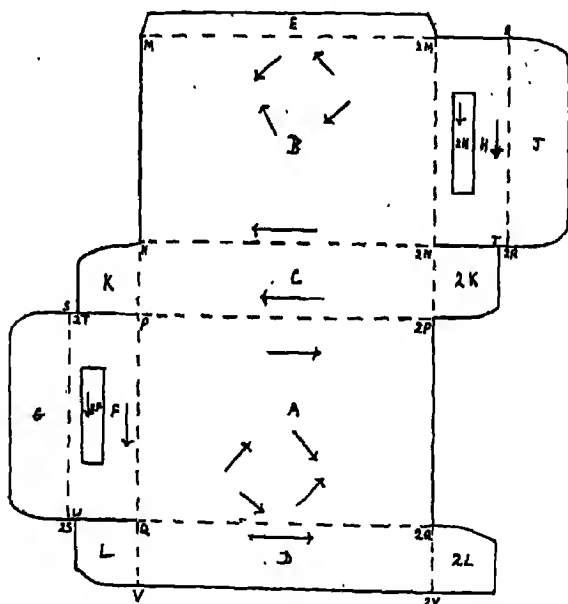


FIG. 159.—SINGLE-PIECE PACKET FOR DENTIST'S IMPRESSION TRAYS.

NV, 2M2P, R2R, and 2Q2V. Printing, apart from the special printing areas already mentioned, is required on the outer surface of B, H, C, F, A and D, in one or more directions as indicated by the arrow or arrows thereon.

This model is usually demanded manufactured of paper-board. It most frequently occurs paper-covered on its outer surface only.

Regarding dimensional data, the length of this packet

is $4\frac{1}{4}$ inches, its width is 3 inches, and its depth is 1 inch only. The total weight uncharged is just under half an ounce.

Fig. 160 shows an unusually attractive single-piece smoker's match packet which is largely sold in hotels.

Taking the various parts, A is the front, which carries a pronounced slit lettered ST, leaving a dually-nosed portion 2A attached to A. The back is shown at B, the inner base at H, the outer base at G, an inner side at E, an outer side at C, and another side made up of one piece only at D.

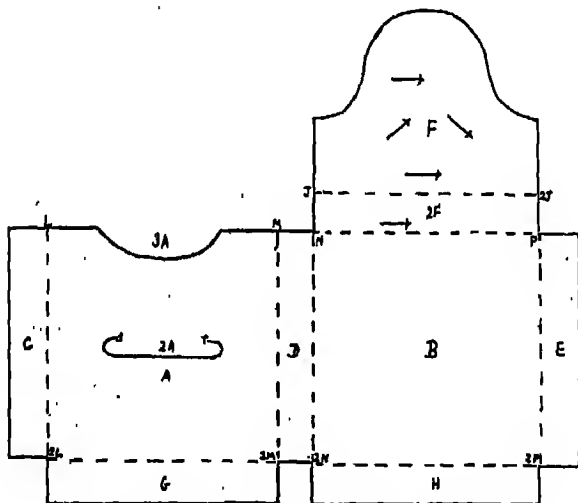


FIG. 160.—SINGLE-PIECE POPULAR PRICED POCKET MATCH BOX.

The top is formed of 2F, and the top flap of F, which has a pronounced rounded nose to fit into the slit ST of A. A thumb-hole 3A is cut out of A as shown, a strip of sand-paper or coloured glass-paper is put on to the outer surface of the base G, and adhesive is applied to the inner surface of C and G.

Regarding the bends or folds, these are full right angles, as will be anticipated. They are made along the lines J2J, NP, 2L2M, and 2N2P, as well as along another quartette of edges lettered L2L, M2M, N2N, and P2P. Box-makers

should note that the whole of the outer surface of this example is usually demanded paper-covered, and may be ordered to be printed in as many as half a dozen different colours, although it carries no actual wording. The printed wording is limited to the inner surface of the model only, and is found on F and 2F, the direction of the print being that of the arrows thereon. Printing in one colour usually suffices on the inner surface.

Regarding dimensional data, the length of the model in this case is the same as its height, *e.g.*, 2 inches exactly. The width is $\frac{3}{4}$ of an inch only, and the total weight uncharged is under $\frac{1}{4}$ of an ounce. It holds rather more than 40 small matches.

TWO TYPES FOR TOBACCO TRADERS

Fig. 161 illustrates an interesting two-piece example of the cigarette industry.

Taking the cover first, B is its base, while A, 2A, and 3A form its top. C, 2C, 3C form one end, D, 2D, and 3D form the other, while E is the attachment flap, which is liberally covered with adhesive on its outer surface, and then attached to the inner left-hand end of B in the usual way.

Right-angled bends are required, as the trade will anticipate, along the lines F2F, G2G, H2H, and J2J. Printing is demanded mainly in one direction on the outer surface of B, in three directions on 2A (again outer surface), in one direction on A, in one direction on 3A, and on the outer surfaces of C, 2C, 3C, and D, 2D, 3D, in the direction of the arrows thereon. It should be noted specially that A, C, D, is a special printing area of distinctive colouring, which greatly adds to the attractiveness of this very useful example.

Turning now to the trough, a long description of this is unnecessary, as it is similar to several we have had before. The base is made up of A, 2A, the front is made up of C, the back of B, and the front and back flaps are made up of D and E respectively. The ends or sides are obviously made up of F and G, but are not attached to the other portions of the trough by corner pieces or other devices.

Slits are required along the lines JK and 2J2K, after which right-angled bends must be arranged for along the lines H2H, J2J, K2K, L2L, M2M, KL, and 2K2L. It should be noted particularly that the bend along K2K is away from the base, while all the other bends are towards it.

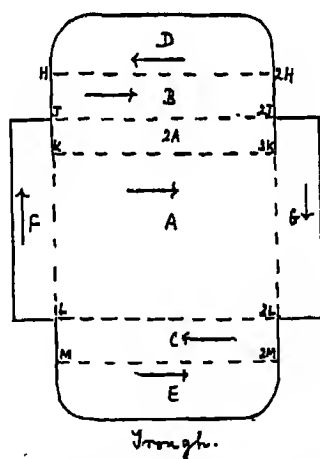
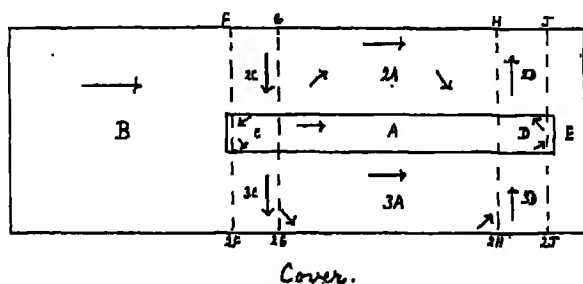


FIG. 161.—TWO-PIECE PACKET FOR CIGARETTE PACKING.

Printing is demanded usually in one colour only, on the outer surface of all parts of the trough carrying arrows, the direction of the print being that of the arrow thereon.

Regarding dimensional data, the length of this packet is $3\frac{1}{4}$ inches, its width is 3 inches, and its depth is $\frac{3}{4}$ of an inch only. The total weight uncharged, taking both portions together, is half an ounce approximately.

Fig. 162 shows a useful five-piece samples packet of tobacco traders. Taking the cover first, this does not need a large amount of comment, consisting as it does of a rectangle of strawboard divided up into a base B, a back C, a top A, and a front D, 2D. The front is attached to B by means of the outer surface paper covering, the overlap of which is indicated by 2D. There is also an inner surface overlap of paper covering on B, C, A, D, and 2D, in the

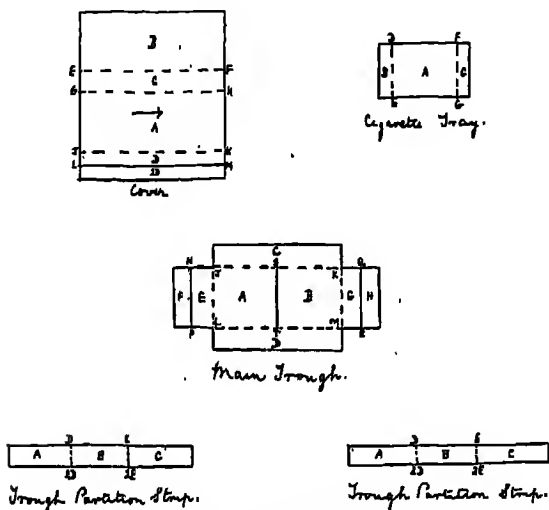


FIG. 162.—FIVE-PIECE POSTAL SAMPLES PACKET FOR TOBACCO TRADE.

direction of E, G, J, L, and F, H, K, M. The width of this is about half-an-inch on either side.

Right-angled bends must be arranged for, as the trade will expect, along the lines EF, GH, JK, but not along LM, while printing in one colour, limited as a rule to half a dozen lines, is also usually demanded on the outer surface of A in the direction of the arrow thereon. The cover is not as a rule attached to the trough by any other means except its own grip.

Taking the main trough next, its base is made up of the two compartments A and B, the back is made up of C, the front of D, and one outer end of E, on to which folds back

an inner end F, while the other end is made up of G, on to which folds back an inner end H. Sometimes these inner ends are made separately, and the strips are then pasted on or glued to the outer ends.

Right-angled bends must be arranged for, as box-makers will expect, along the lines JK, KM, ML, and LJ, while if the outer and inner ends are made in the single style double right-angled bends will be required along the lines NP and QR. The corners K, M, L, J, are joined by the usual outer surface paper covering, and not by special paper corner slips. This is over the entire surface of the trough and extends to about $\frac{1}{4}$ of an inch down the inner surface of its front, back, and ends.

Taking the cigarette tray next, this is always employed inverted, and occupies the larger compartment A of the main trough. It consists, as will be seen, of a rectangle of strawboard, A being its inverted top, while B and C are the two ends of the tray, corresponding with the lines JL and ST of the main trough. Right-angled bends are arranged for, therefore, along the lines DE and FG.

This trough is supplied with a pair of trough partition strips not identical in size. Each is, therefore, sketched out individually. These are placed back to back in the trough so that B of one corresponds with B of the other, and thereby forms the definite partition ST of the main trough. The leg A and the leg C of the shorter partition strip then corresponds with the line SK and the line TM of the trough, while the legs A and C of the longer partition strip correspond with the lines JS and LT of the trough. By means of outer surface paper margins these trough strips adhere firmly to the ends, front, and back of the main trough, but the tray is readily detachable, *i.e.*, it is not glued to them. As box-makers will expect, right-angled bends must be made along the lines D2D, and E2E in the case of both trough partition strips.

Regarding dimensional data, the length of this example is $5\frac{3}{4}$ inches, its width is $2\frac{1}{4}$ inches, and its depth is $\frac{7}{8}$ of an inch only. The total weight uncharged, taking all five portions together, is slightly under $1\frac{1}{2}$ ounces.

CHAPTER XXIX

MANUFACTURERS of children's balls are good customers of the box trade, and require both partitioned boxes and models without partitions. One or two of these have already been described in previous chapters, and in the present chapter another pair is taken up, these being larger than some we have had, and possessing certain interesting and distinctive features.

Box-makers should remember that it is not a very far cry from the children's ball box to the partitioned egg box. Machinery which is designed for the production of one will, therefore, require but small adjustment to produce the other, as there are still many types of egg boxes made in two or more pieces, in spite of the fact that single-piece folding models, plus partition strips, are steadily gaining in favour. Some readers will say that partitioned egg boxes to hold as many as thirty-six eggs are not often wanted. This is very far from being the case, as examples have come to my notice which held a much larger number, the partitions being very similar indeed to those of the children's ball box about to be described, and being arranged in tiers with intermediate boxboard plates above and below.

SINGLE-PIECE AND TWO-PIECE MODELS

Fig. 163 illustrates a useful toilet paper carton made in a single piece. Taking the various parts, A is the top, while 2B and 3B form the base, the shaded portion B being completely cut out, so as to allow of the material being drawn through the box in which the carton is placed for use. It follows, therefore, that C is the front, D is the back, and E is the attachment flap, which is rather generously covered with adhesive and then attached to the back of D, so that its inner margin P2P corresponds with the outer margin line V2V.

The ends of this toilet paper carton are compound, as will be evident from the sketch. Thus L and N, taking the right-hand side first, form a pair of inner end flaps, G forms an intermediate adhesive-covered end flap, and J forms an

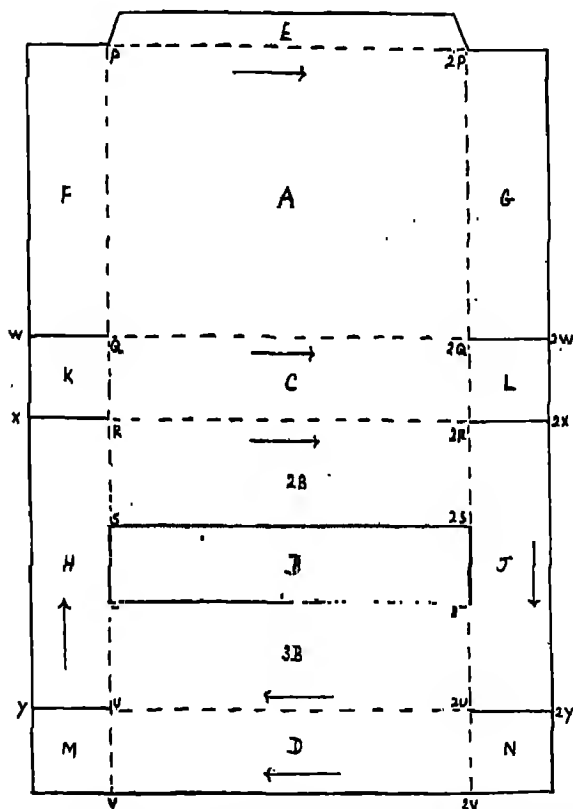


FIG. 163.—ATTRACTIVE SLOTTED SINGLE-PIECE CARTON FOR TOILET PAPER.

extreme outer end flap, the adhesive on the outer surface of G adhering to the inner surface of J. The left-hand end is made up in a similar manner, thus K and M are inner end flaps, F is an intermediate adhesive-smeared flap, and H is the extreme outer end flap, which is attached to the outer surface of F.

To secure the independent operation of all these parts, cuts are required, as will be expected, along the lines WQ, XR, YU, 2Q2W, 2R2X, and 2U2Y. Right-angled bends are then arranged for along the long lines PV and 2P2V, or, to be absolutely correct, along the long lines PS, 2P2S, plus their complements TV, and 2T2V, and also along the short lines P2P, Q2Q, R2R, and U2U. An outer surface paper covering is usually demanded, while printing is generally ordered in one colour only on the outer surface of

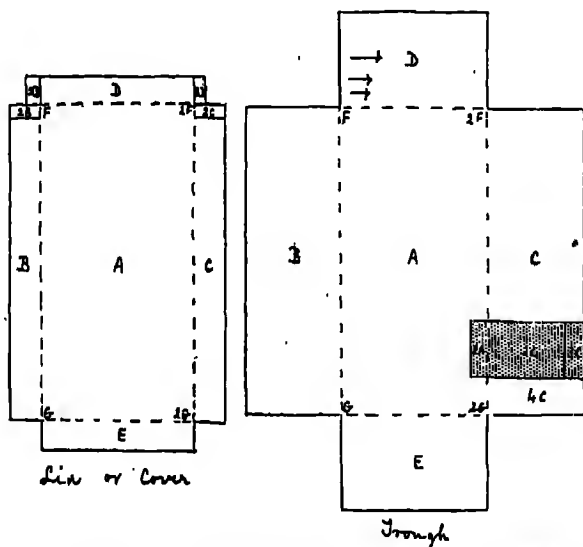


FIG. 164.—TWO-PIECE BOX FOR FELT BED SLIPPERS.

A, C, 2B, 3B, H, D, and J, the direction of the print being that of the arrows thereon.

Regarding dimensional data, the length of this carton is 5 inches, its width is 4 inches, and its depth is $1\frac{1}{8}$ inches only. The total weight unchanged is half an ounce exactly.

Fig. 164 illustrates a useful dual-piece example in which felt bedroom slippers are sold to the public.

Taking the lid or cover first, A is its top, B is one side, C is the other, E is one end, and D is the other. The corners are joined by stout heavily-gummed paper slips, the exposed portions extending D to the left and to the right, being

shown at 2D and 3D respectively, while the final positions of these on B and C are shown by the small rectangles lettered 2B and 2C respectively. Right-angled bends must be arranged for, as container concerns will expect, along the lines F2F, 2F2G, 2GG, and GF. The lid is not usually attached to the trough by any other means except its own grip, and while paper-covered over its entire outer surface, it does not, generally speaking, carry any print.

Turning now to the trough, its base is made up of A, 2A, one side is made up of B, the other side of C, 2C, 3C, 4C, one end is made up of E, and the other end is made up of D. The corners F, 2F, 2G, and G are joined in a similar manner to that described in the case of the lid, though the gummed paper strips employed are, of course, longer. Right-angled bends are arranged for along the lines F2F, 2F2G, 2GG, and GF, while the sides, ends, and margins of the base are demanded paper-covered on their outer surface. The overlap of this paper covering is rather wide, and is clearly shown on the outer surface by the shaded portion 2A, 2C, 3C. The width of margin of paper covering on the base is shown by the shaded rectangle 2A, this being continued all round, while the inner margin of paper covering is shown by the strip 3C which again is shaded, this also being continued right along C and along the inner edges of the other three portions of the trough. Printing, as a rule, is demanded on the outer surface of D only, three lines generally being sufficient. The direction of the print is that of the arrows.

Regarding dimensional data, the length of this box is $10\frac{1}{2}$ inches, its width is 5 inches, and its depth is $3\frac{1}{4}$ inches only. The total weight uncharged, taking both portions together, is just under $3\frac{1}{2}$ ounces.

TYPES OF BOXES FOR CHILDREN'S BALLS

Fig. 165 shows a pilfer-proof children's ball box, designed to take no less than three dozen specimens of an inflated type.

Taking the lid or cover first, its top is made up of A, 2A, 3A, 4A, the sides are made up of B, 2B, 3B, and C, 2C, 3C respectively, the front is made up of E, 2E, 3E, and the back is made up of D only. The front is extended to the

left and to the right by a pair of small subsidiary flaps lettered H and J, while the back is similarly extended in both directions by another pair of identical flaps lettered F and G. As the trade will anticipate, F is wire-stitched on to 2B, as shown by the wire-stitch holes on each, G is wire-stitched on to 2C, J on to 3C, and H on to 3B, right-angled bends having previously been made along the lines M₂M, L₂L, 2NN, and 2KK.

A special printing area or label area is provided on the outer surface of the lid or cover, this being shown by E, 4A.

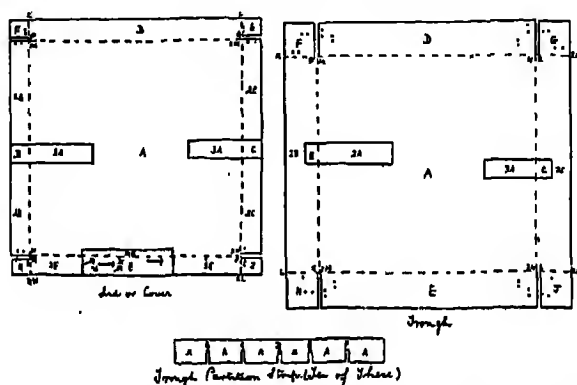


FIG. 165.—TWELVE-PIECE SEALED PARTITIONED CHILDREN'S BALL BOX.

The printed wording is in the direction of the several arrows on E only, though the design is continued on to 4A.

Turning now to the trough, A is its main base, though, of course, the full base is made up of A, plus 2A, plus 3A. The sides of the trough are shown at 2B, B, and 2C, C, the back is shown at D, and the front at E. In this instance it is the sides which are extended by subsidiary flaps, and not the front and back, these four being lettered F, G, H, and J. F is twice wire-stitched on to D, as shown by the two pairs of wire-stitch holes on each, and in a similar manner G is wire-stitched on to D, J on to E, and H on to E, right-angled bends having previously been arranged for along the lines K₂K, L₂L, M₂M, and N₂N.

Only one of the ten trough partition strips is sketched

out, this carrying a quintette of slits terminating at B, C, D, E, and F in an upward direction, five of the strips being inverted, and fitted into these slits in a transverse fashion. The result is that the base of the trough is divided up into thirty-six compartments, one for each of the three dozen balls the box is designed to hold.

With regard to the pilfer-proof device, this takes the form of a pair of bands. Half of one of these is shown by B, 2A, on the lid or cover, the complement of this being B, 2A, of the trough. Half of the second band is shown on

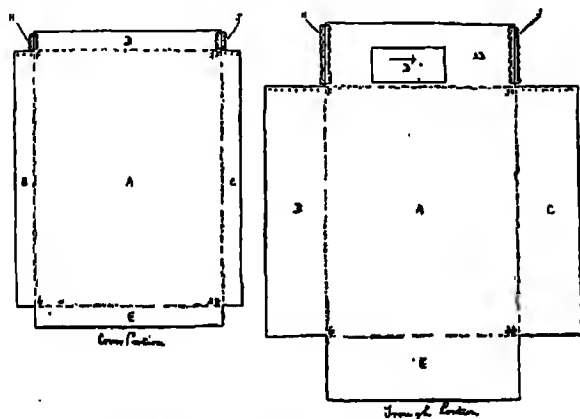


FIG. 166.—LARGE METAL-CORNERED CHILDREN'S BALL BOX.

the lid or cover by 3A, C, the complement of this on the trough being 3A, C. If a box arrives with one or both of these paper bands broken, the customer recognises instantly that it has been opened, and that some of the contents may, therefore, be missing.

Regarding dimensional data, the length of this box is the same as its width, *i.e.*, both are 11 inches exactly. The depth is 2 inches only, and the total weight uncharged, taking cover, trough, and ten partition strips together, is just under 7 ounces.

A less elaborate but not less useful type of children's ball box is sketched out in Fig. 166. Taking the cover portion first, A is its top, B is one side, C is the other, D is the back

and E is the front. The corners F, 2F, 2G, and G are secured by metallic corner pieces, one of which is shown at H and the other of which is shown at J, in the case of D, there being a corresponding pair for E. Right-angled bends are arranged for, as box-makers will anticipate, along the lines F2F, 2F2G, 2GG, and GF, a white paper covering usually being demanded on the inner lid surface, and a coloured paper covering on the outer.

Turning now to the trough, A is its base, B is one side, C is the other, D, 2D forms the front, and E forms the back. D is a special printing area or label area on the outer surface of the front, which may be demanded printed in three or four different languages. All four corners are secured by metallic corner pieces, two of which only are shown at H and J, while right-angled bends are required along the lines F2F, 2F2G, 2GG, and GF.

As in the case of the lid, so also in the case of the trough portion, a white paper covering is demanded on the inner surface, and a coloured one on the outer surface. Good-class strawboard is used throughout.

Regarding dimensional data, the length of this example is 13 inches, its width is $9\frac{1}{4}$ inches, and its depth is $3\frac{1}{4}$ inches only. The total weight uncharged, taking both portions together, and including the metallic corner pieces, is 7 ounces.

THREE-PIECE AND FOUR-PIECE PACKINGS

Fig. 167 illustrates a useful postal box employed for medical samples. Taking the outer box strip first, A is the back, B is one end, C is the front, D is the other end, and E is the back attachment strip, which is wire-stitched on to A in three places, as shown by the three pairs of wire-stitch holes on each. Right-angled bends must be arranged for, as the trade will expect, along the lines F2F, G2G, H2H, and J2J.

Taking the inner box strip next, A is the inner front, which after being turned at right angles is wire-stitched on to the inner surface of C of the outer box strip, B is the base, C is the inner back of the box, which corresponds with and

conceals the inner surface of A of the outer box strip, D is the top of the box, and E, 2E, 3E forms the top flap, which fits in behind C of the outer box strip, and forms the complement of A, wire-stitched thereto, although itself it is free. Right-angled bends must be arranged for, as the trade will expect, along the lines F2F, G2G, H2H, and J2J.

A paper opening slip is provided, otherwise this model is

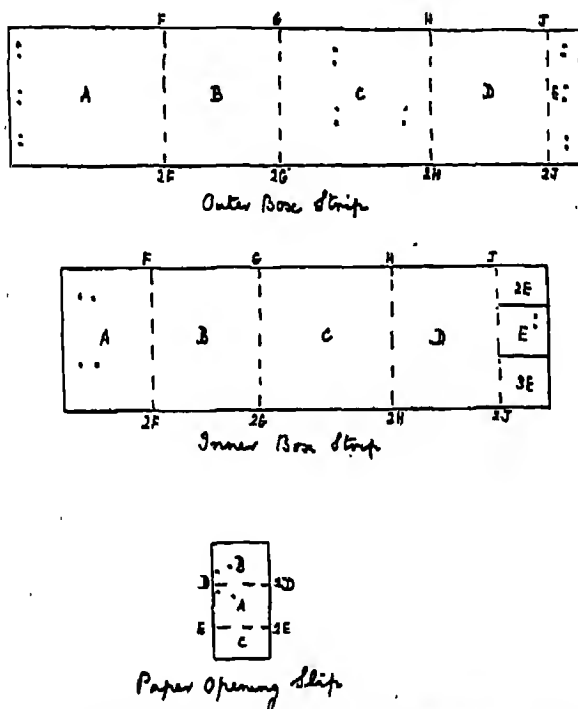


FIG. 167.—USEFUL MODEL FOR MEDICAL SAMPLES POSTAL BOX.

very difficult to empty. This paper opening slip is sketched out separately, and consists of a rectangle B, A, C, of stout creamy-white material. A double right-angled bend is provided at D2D, and a single right-angled bend at E2E. The portion A is applied to the outer surface of E of the inner box strip, and the portion B to the inner surface thereof. A wire-stitch is then put through the three, as

shown by the three pairs of dots on these portions. No printing on any surface is, as a rule, demanded, but paper covering on the outer and inner box strip is generally ordered on their outer surface, stout corrugated strawboard being greatly favoured for the actual material.

Regarding dimensional data, the length of this box is $4\frac{1}{4}$ inches, its width is $3\frac{1}{4}$ inches, and its depth is $3\frac{3}{4}$ inches.

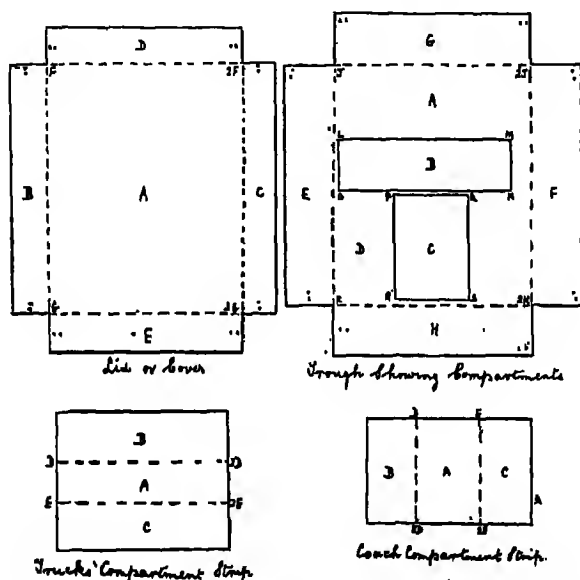


FIG. 168.—FOUR-PIECE COMPARTMENT BOX FOR TOY TRAIN TRADE.

The total weight uncharged, taking all three portions together, is slightly over 2 ounces.

Fig. 168 illustrates an interesting example from the toy train trade.

Taking the lid or cover first, A is its top, B is one side, C is the other, D is the back, and E is the front. An illustration area may be demanded on the outer surface of A, of an attractive colouring, while the corners of the lid are joined by means of wire stitches, as shown by the dots thereon. Right-angled bends are arranged for, as the trade will expect, along the lines F2F, 2F2G, 2GG, and GF.

Taking the trough next, its base is made up of A, plus B, plus C, plus D, one side is made up of E, the other of F, one end or rather the back, of G, and the other end or front of H. The corners again are joined by means of wire stitches, not by the usual paper slips, as shown by the pairs of dots on each. Right-angled bends are required along the lines J₂J, 2J₂K, 2KK, and KJ. No illustration area is, as a rule, demanded on the outer surface of the trough base.

Two loose compartment strips are provided to complete this model. Taking the trucks' compartment strip first, its base is shown at A, one side is shown at B, and the other side is shown at C. Right-angled bends must be arranged for along the lines D₂D, and E₂E. No print or paper covering are, as a rule, demanded on either surface.

Taking the coach compartment strip finally, its base is shown at A, one end is shown at B, and the other end is shown at C. Right-angled bends must be arranged for along the lines D₂D, and E₂E as before. No paper covering or printing on either surface are again demanded.

The coach compartment strip is then inserted in the trough in an inverted manner, so that its base A occupies the position C in the trough base. One coach is then slipped into the compartment D, another into C, or, as it now is, A, and a third into the unlettered extension of A to the right of C.

Without the aid of adhesive or other similar substance the trucks' compartment strip is then inserted in the trough base, so that its base A corresponds with the rectangle B of the trough itself. The trucks' compartment strip again is inverted. The trucks are then put into it and the space A above is reserved for engine and tender.

Regarding dimensional data, the length of this useful model is 5 inches, its width is 4 inches, and its depth is an inch only. The total weight uncharged, taking all portions together, *i.e.*, including partition strips, is only three-quarters of an ounce. Much larger models built on very similar lines are, however, also required.

CHAPTER XXX

REFERENCE has been made on one or two previous occasions to the fact that the toilet trader is a very good customer of the box-maker. A pair of cartons appealing to this line of business are, therefore, taken up for detailed description and illustration in this chapter, and it is hoped on a future occasion to do justice to this subject also by giving additional illustrations, although the variety of designs is so great that a special volume might some time with great advantage be devoted to them in entirety.

Another point to which I would like to draw the special attention of readers in the present chapter before actually proceeding with the examples, is the fact that there are coming into the market a number of boxes of large size with unattached partitions and unattached compartments, *i.e.*, those that fit tightly enough into the box itself, but are not attached thereto, or to themselves, by any other means except their own grip. These boxes are mainly foreign made, and two are taken up this month, although further much-used and exceptionally interesting examples will be covered at a later date. The use of these compartments or compartment strips is a great aid to the selling of the goods, and protects them from damage both during transit and when they are actually exposed for sale in fancy goods stores.

A PAIR OF INTERESTING PACKETS

Fig. 169 illustrates an attractive and important single-piece packet for tubes of toilet preparations. Taking the various parts, the front is made up of B, 2B, the back of A, 2A, and the sides respectively of C, 2C, and D, 2D. Special printing areas are furnished by the portions A, C, B, D, the printing surface of these being of a different colour from the

rest of the carton, and in some instances the actual colour of the print differing also.

The back is extended in an upward direction by a top F, and a top flap G, while the base is found in H, and this is extended by a base flap J. A quartette of subsidiary flaps,

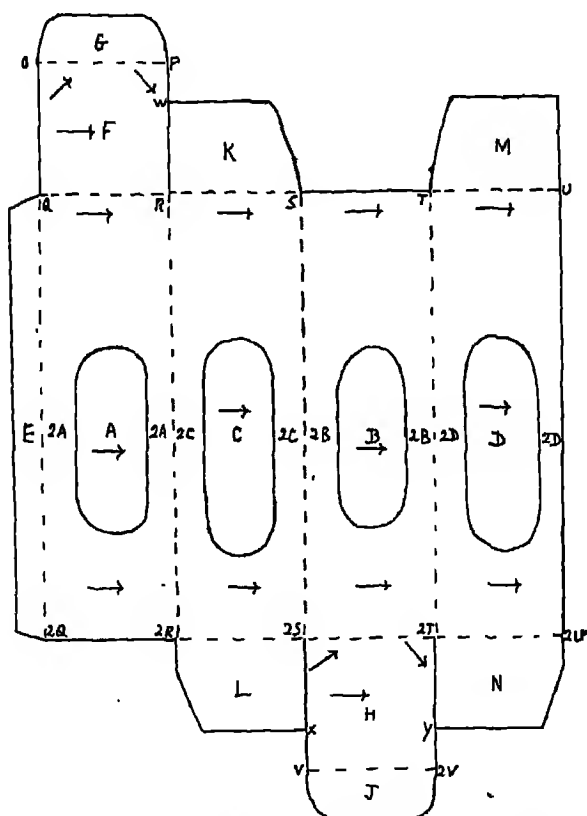


FIG. 169.—SINGLE-PIECE TOILET PREPARATION PACKET.

two for the top and two for the base, are provided by K and M, and L and N respectively.

To liberate the subsidiary flaps from the front and base, knife cuts are required along the lines WR, 2SX, and 2TY, after which box-makers should arrange for right-angled bends to be made along the lines OP, QS, UT, 2R2U, and

V2V, taking them horizontally, and Q2Q, R2R, S2S, and T2T, taking them vertically. The attachment flap E is then covered with adhesive, and it adheres to the inner surface of 2D, so that its inner margin Q2Q corresponds with the outer margin line lettered U2U. Adhesive is not generally demanded on the top or base portions of this carton, or on their flaps.

Printing is demanded in several directions on the outer surface of this packet, apart from the special printing areas already discussed. Thus it is found in three directions as shown by the three arrows on the outer surface of the top F, and in a similar trio of directions on the outer surface of the base H. Horizontal printing is also demanded both above and below the special printing areas A, C, B, and D, as shown by the arrows between Q and R, R and S, S and T, and T and U, and by the arrows above 2Q2R, 2R2S, 2S2T, and 2T2U. A coloured outer surface is usually demanded in addition to a creamy-white inner surface.

Regarding dimensional data, the length of this packet, or, if we take it as an upright example, its depth is 6 inches exactly. The area of the top and base are $1\frac{1}{2}$ by $1\frac{1}{2}$ inches, *i.e.*, they form perfect squares. The total weight uncharged is just under half an ounce.

A more complicated band-sealed postal outer is sketched out in Fig. 170. The advantage of this design is that the carton is absolutely pilfer-proof.

Taking the various parts, the front is made up of 4A, 5A, 6A, 2A, A, 3A, 7A, 8A, and 9A, the back of 4B, 5B, 6B, 2B, B, 3B, 7B, 8B, 9B, one side is made up of 2C, C, 3C, the other side is made up of 2D, D, 3D, the attachment flap is made up of E only, the top is made up of 2H, H, 3H, which is extended by a top flap, J, and the base is made up of 2F, F, 3F, which is extended by a base flap G. A quartette of four-sided subsidiary flaps, lettered K, M, L, and N, completes the equipment of this packet.

As will be gathered, two sealing bands are provided. The first of these comprises H, 5B, B, 8B, 5A, A, 8A, F, while the second is made up of C, 2A, A, 3A, D, 2B, B, 3B. Extensions which overlap are not shown in the sketch, but

the overlaps are usually arranged to fall either on A only, or on 5A, A, 8A in one case, and 2A, A, 3A in the other. When the direction label is put over these overlaps it will be evident that a very secure postal packet results.

As carton concerns will anticipate, cuts must be made

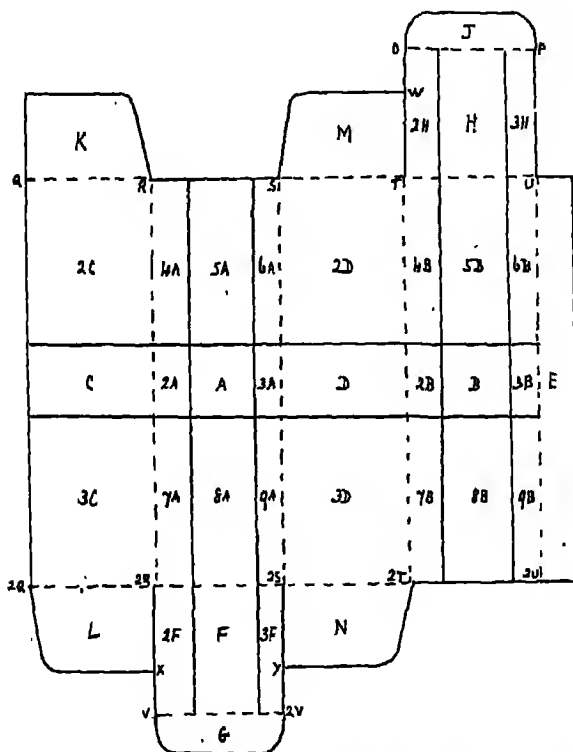


FIG. 170.—PAPER BAND SEALED SAMPLES POSTAL PACKET OF TOILET TRADE.

along the lines WT, 2RX, and 2SY, to liberate the subsidiary flaps from the top and base of the box itself. Right-angled bends are then arranged for along the lines OP, QR, SU, 2Q2T, and V2V, taking them horizontally, and R2R, S2S, T2T, and U2U, taking them vertically. The attachment flap E is covered with adhesive on its outer surface, and adheres to the inner surface of 2C, C, 3C, its inner

margin U2U then corresponding with Q2Q. Paper covering in addition to the paper sealing bands is demanded as a rule on the entire outer surface, but not on the inner surface.

Regarding dimensional data, the depth, taking this as an upright example, is $6\frac{1}{4}$ inches, while the areas of the base and top are $1\frac{7}{8}$ by $1\frac{7}{8}$ inches, these, therefore, forming perfect squares. The total weight uncharged, including sealing bands, is approximately 1 ounce.

USEFUL EXAMPLES OF TWO- AND THREE-PIECE BOXES

A brief description only is required for the paper-frilled knitted apparel box which forms the subject of Fig. 171.

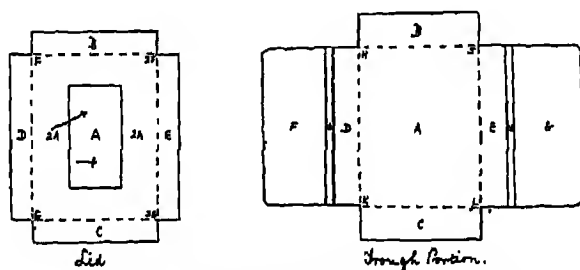


FIG. 171.—LARGE TWO-PIECE FRILLED EXAMPLE FOR SALE OF KNITTED APPAREL.

Taking the lid first, its top is made up of A, 2A, A being a special printing area as shown by the arrows on one of its edges and inside it. The lid sides are formed of D and E, the front of C and the back of B. The corners are joined by the usual heavily gummed paper strips not shown in the drawing, and in addition the outer surface paper covering proves of assistance in this direction. The overlap of the inner surface paper covering on B, C, D, and E, is from $\frac{1}{2}$ an inch to an inch in width, brown attractively printed paper being favoured.

Turning now to the trough portion, of which a separate sketch is given, A is its base, B is its back, C is its front, D, 2D forms one side, E, 2E forming the other, while F, 2D forms one paper frill, and G, 2E forms the other, the

narrow strips 2D and 2E being, therefore, the overlapping adhering strip of the frills on the sides themselves. No frills are provided elsewhere, *i.e.*, B and C are not extended by them. Plain white unprinted material is favoured for the frills, the corners of which are chamfered off as shown. It should be noted also that the outer surface of the sides, back, and front is demanded paper-covered in brownish material similar to that of the lid or cover, but the base is usually paper-covered with a much cheaper greyish or whitish material.

Right-angled bends are required in the case of the lid along the lines F2F, 2F2G, 2GG, and GF, while in the case of the trough they must be made along the lines HJ, JL, LK, and KH. The corners of the trough are joined by the usual heavily gummed paper strips, not shown again in the sketch, and here also the outer surface paper covering is of some assistance in this direction. The lid, by the way, is not, as a rule, attached to the trough portion by any other means except its own grip.

Regarding dimensional data, the length of this box is $14\frac{1}{2}$ inches, its width being rather less, *viz.*, 11 inches. Its depth is 3 inches only, and the total weight uncharged, taking lid and cover together and including paper frills, comes to exactly $12\frac{1}{2}$ ounces.

Another interesting box emanating from the drapery industry is sketched out in Fig. 172.

Taking the trough top plate first, this is rather an exceptional though an extremely useful addition. It is slipped on to the contents in the trough after charging before the lid is put on. As will be seen by the rectangle lettered Z, its shape is quite simple, and it carries no print. A paper covering may be demanded on the outer surface, which is usually glazed, while sometimes also a similar paper covering is demanded on the inner surface.

Turning now to the lid or cover, of which an individual drawing is given, the lid top is found at A, one end is shown at B and the other at C, the lid front is shown at E, and the lid back at D. Heavily glued strips of textile fabric are in this instance used as corner pieces instead of the usual

gummed paper strips. Right-angled bends are required along the lines F_2F , $2F_2G$, $2GG$, and GF , while paper covering is usually demanded over the entire outer surface, generally glazed in character, with narrow whitish margins along the fold lines. The overlap of the outer surface paper covering on the inner surface is generally half the depth of the sides or ends.

Turning finally to the trough, A is its base, C , $2C$ forms one end, B , $2B$, $3B$ forms the other end, D , $2D$ forms one

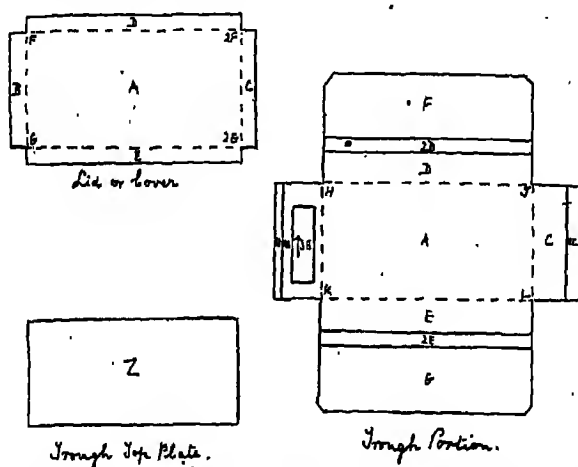


FIG. 172.—THREE-PIECE PAPER FRILLED DRAPER'S BRACES BOX.

side, E , $2E$ forms the other side, F , $2D$ forms one paper frill or flap, and $2E$, G forms the other. Analysing the parts still further, we find that B and $2C$ are the inner surface margins of paper covering, and $3B$ is the outer surface printing area, carrying two or three lines of print in the direction of the arrow thereon.

Here again stout strips of white textile fabric heavily covered with adhesive are used as a means of joining the corners. The outer surface paper covering of the ends, etc., is similar to that of the lid or cover, but the trough base only is covered with whitish or greyish material cheaper in character. Right-angled bends are required, as box-makers will expect, along the lines HJ , JL , LK , and KH ,

care should be taken to chamfer the edges of each of the paper frills as shown, and no arrangement need be made to attach the trough to the cover by any other means except its own grip.

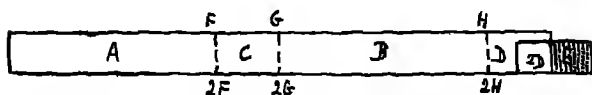
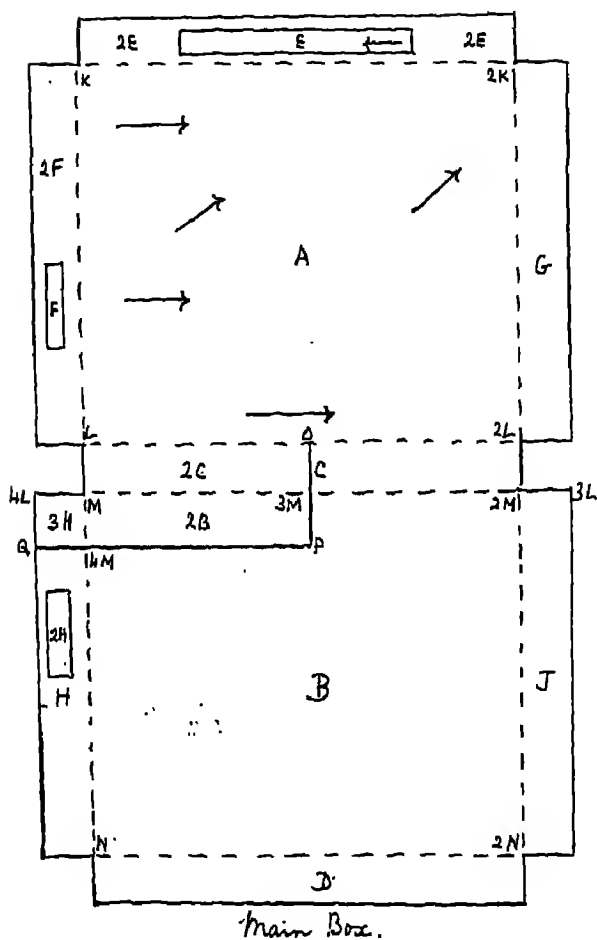
Regarding dimensional data, the length of this box is $14\frac{1}{4}$ inches, its width is rather over half this, viz., $7\frac{3}{4}$ inches, while its depth is $2\frac{3}{4}$ inches only. The total weight uncharged, taking all portions together, *i.e.*, including trough top plate and paper frills, makes exactly $11\frac{3}{4}$ ounces. When well wrapped up with paper and string this example is plenty strong enough to send short journeys by post or rail.

THIRTEEN-PIECE AND FOURTEEN-PIECE TYPES

Until recently it was the exception rather than the rule for boxes to be made in thirteen or fourteen pieces. On the Continent, however, considerable strides have been made with these compartment types, and it will not be long in my opinion before we have boxes which will be made in twenty or twenty-four pieces, since there is at the present time a very big sale in England for goods marketed in these thirteen- and fourteen-piece models.

Taking Fig. 173 from the cheap hair net industry, the main box is made in one piece and the other twelve pieces consist of partition strips.

The lid of the main box is shown at A, and this it should be noted is demanded printed on its *inner* surface, since it is used for display purposes open, in several directions, as depicted by the arrows thereon. The lid front is shown at E, 2E, and this is demanded printed on the outer surface in a special printing area E as shown by the arrow thereon. The back of the box is made up of C, 2C, the lid sides are made up of G in one case, and F, 2F in the other, 2F being a tape end covering strip made of paper. The base of the box is made up of B plus 2B, the trough front is made up of D, one side is made up of J, and the other is made up of H, 3H, 2H, the last strip again being a tape end covering strip, by means of which and the previously lettered one a length of tape is secured, alike to the cover and trough



Partition or Compartment Strip.
(Twelve of These).

FIG. 173.—THIRTEEN-PIECE PARTITIONED DISPLAY BOX FOR SINGLE DOZENS LADIES' SEASIDE HAIR NETS.

portions of the box. These strips are provided on the inner surface of the box, not on its outer surface.

The corners are joined by the usual heavily gummed brownish paper strips, none of which are shown in the drawing. It should be noted, however, that in the case of the corners M and 2M, the line LM is merged into the line M4L, and similarly the line 2L2M is merged into the line 2M3L, as there are no extension flaps of 2C and C.

Right-angled bends will be required, as the box trade will anticipate, along the lines K2K, L2L, M2M, N2N, KL, 2K2L, MN, and 2M2N. The bend L2L is frequently fortified by a textile strip, or by paper strips on the outer and inner surface. Paper covering is demanded on the inner surface of A, on the outer surface of the whole of the cover portion, and on 2C and C, on the trough front and sides, and on narrow margins of the outer surface of the trough base.

Regarding the partition strip, the front is made up of A, one end is made up of C, the back is made up of B, and the other end is made up of D, 2D. A heavily gummed paper flap is made up of 2D, E, and the shaded portion E is attached to A after making right-angled bends along F2F, G2G, and H2H, the net result being to form a neat little rectangular compartment, the size of which is shown by 2B in the main box, or more accurately by the rectangle M3MP4M, the height of this extending to the full height of the back, *i.e.*, the height line is shown by O3M. Twelve compartment strips are provided, and after folding they fit in and completely fill the base of the box.

Regarding dimensional data, the length of this box is $9\frac{1}{8}$ inches, its width is $8\frac{1}{8}$ inches, and its depth is 1 inch only. The total weight uncharged, taking all thirteen portions together, is just under $5\frac{1}{2}$ ounces.

Fig. 174 depicts a fourteen-piece compartment box which is enjoying a big sale at the present time.

Taking the lid or cover first, A is its top, E is its front, D is its back, B is one end, and C, 2C is the other, 2C being the printing area or label area, carrying usually a single line of print in the direction of the arrow on the outer surface. The whole of the outer surface of the lid carries a creamy-

white paper covering, the inner margins of which are sometimes as much as half the depth of the ends, front, and back, while the corners are wire-stitched as shown by the single dots on D and B, etc. The lid is not attached to the trough by any other means except its own grip, and none of the compartment troughs are attached to the trough or box base by glue or other means.

Turning now to the trough or box base, the full area of the base is made up of A, plus 2A, but the area of a single compartment is made up of 2A only, the base being large enough to take no less than twelve of these. The trough

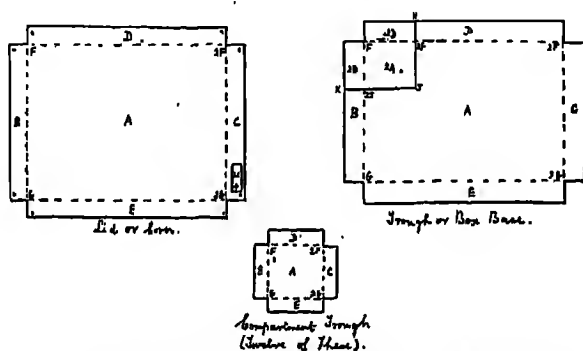


FIG. 174.—FOURTEEN-PIECE COMPARTMENT BOX FOR THE SALE OF SHELL PURSES.

front is made up of E, its back is made up of D, plus 2D, one end is made up of B, plus 2B, and the other end is made up of C only. The corners are not wire-stitched or joined by paper slips, as the outer surface paper covering over the front, back, and ends proves sufficiently strong. Only narrow margins of this extend on to the outer surface of the trough base A, 2A, most of it being bare board.

Right-angled bends are required, as will be expected by the trade, along the lines F2F, 2F2G, 2GG, and GF, in the case of the trough and similarly in the case of its cover, these, however, not usually being fortified either on the outer or inner surface except by the marginal paper covering already referred to.

Turning finally to the compartment trough, of which a

separate drawing is given, A is its base, B and C are its sides, D is its back, and E is its front. Right-angled bends are required along the lines F₂F, 2F₂G, 2GG, and GF the outer surface of B, C, D, and E is demanded paper-covered, the inner surface margins extending to the depth of $\frac{1}{4}$ to $\frac{1}{2}$ an inch in different examples. This outer surface paper covering again proves a sufficiently strong means of joining the corners, *i.e.*, wire stitching or paper slips can be dispensed with. These troughs are fitted side by side and end by end with 2A in the drawing of the trough or box base, three rows of four troughs each being required to fill it. No printing is demanded either on the outer or inner surface of any portion of any compartment trough.

Regarding dimensional data, the length of this box is $9\frac{3}{4}$ inches, its width is $7\frac{1}{2}$ inches, and its depth is 1 inch only. The compartment troughs measure $2\frac{3}{8}$ by $2\frac{3}{8}$ by $\frac{7}{8}$ of an inch approximately. The total weight uncharged, taking all fourteen portions together, is $3\frac{3}{4}$ ounces approximately, hence it will be concluded that light material is used throughout in the manufacture.

CHAPTER XXXI

SEVERAL of the models taken up for discussion in the present chapter are, as will be seen, fitted with partitions. Box-makers should give greater attention to these and other partitioned boxes in the future than they have done in the past, as a compartment age is rapidly coming in the British Isles, while it has already arrived in Germany and certain other countries.

Partitioned boxes are not more expensive to produce in long numbers than are some of the single-piece elaborate folding examples described in previous articles. In short numbers, however, they are exceptionally costly to produce, and hence I recommend all orders for only a few hundreds to be respectfully declined. In many instances users can, if proper persuasion is exercised, be made to realise the wisdom of placing big orders rather than small ones, while prospective customers should always have it pointed out to them that a partitioned box, specially suitable for one industry is often very easily adapted, if not ideally suitable, for others. Some firms make certain of the boxes they require themselves, and divide up the other orders amongst a number of small firms. Readers should discourage the practice, pointing out to prospective customers that especially in the case of partitioned boxes they will be able to meet them much more fully in regard to price if their whole requirements as regards box-making are placed with them.

A PAIR OF THREE-PIECE PACKINGS

Fig. 175 shows a three-piece as two-piece stationers' sundries posting box, which is proving very popular at the present time. Taking the base and top strip first, the top itself is made up of A, 2A, 3A, and this is extended by a top or front flap E. The back is shown at D, the base at B,

and the base extension flap forming a further part of the inner front is shown at C. Right-angled bends are arranged for along the lines F2F, G2G, H2H, and J2J. The narrow strip A of the top is a portion of the sealing band.

Turning now to the secondary strip and other portions of sealing band, which are shown attached to each other, C is the front of this, from which is cut out a thumb-hole N,

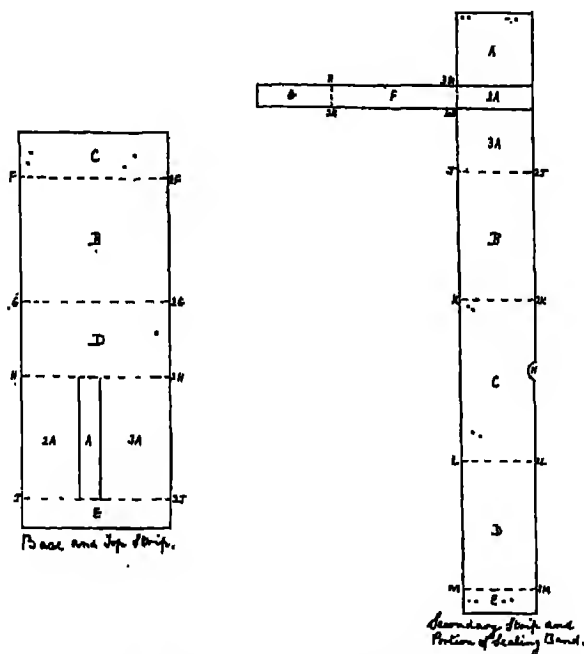


FIG. 175.—THREE-PIECE STATIONERS' SUNDRIES POSTING BOX.

this last, however, being concealed by the sealing band when this is put around the made-up box. One end is shown at D, the other end at B, while the back is made up of A, 2A, 3A, 2A again being a portion of the sealing band, which is extended to the left by further portions F and G. An attachment flap is provided at E, and this is wire-stitched on to A as shown by the pairs of dots on both. The front C of the secondary strip is wire-stitched on to C of the base and top strip, as shown by the pairs of dots on both, while

right-angled bends are arranged for along the lines H_2H , $3H_4H$, J_2J , K_2K , L_2L , and M_2M . From this it will be evident that the sealing band is made up of A of the base strip, plus G, plus F, plus 2A of the secondary strip. The whole of the inner surface of this paper band carries adhesive, but no print as a rule. Corrugated strawboard of moderate

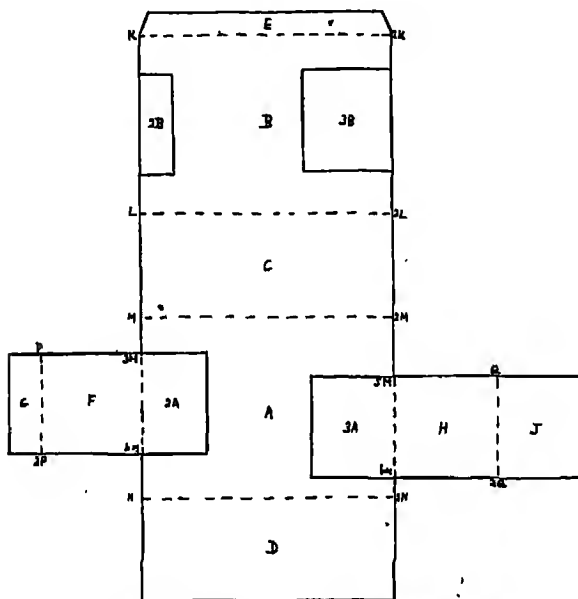


FIG. 176.—THREE-PIECE AS SINGLE-PIECE TOILET TRADERS' SAMPLE POSTING BOX.

thickness is a favourite material for the manufacture of this model.

Regarding dimensional data, the length of this box is 7 inches, its width is $5\frac{1}{2}$ inches, its depth is $3\frac{1}{2}$ inches only. The total weight uncharged, taking both portions together and including the sealing band, amounts to approximately $3\frac{1}{2}$ ounces.

Fig. 176 illustrates an interesting type of toilet traders' samples box for postal work. Taking the various parts, the top is made up of A, 2A, 3A, and frequently carries a special printing or label area, printed in the direction of M_2M .

The base is made up of B, plus 2B, plus 3B, and this is extended by a base attachment flap E, which adheres to the inner surface of the front D, by means of adhesive it carries on its outer surface. The back of this postal carton is, as will be anticipated, made up of C only, while the two end paper seals consist of G, F, 2A in one case, and 3A, H, J, in the other, G being attached to and completely concealing 2B, in each case these portions being applied to the outer or under surfaces. Right-angled bends are required, as box-makers will expect, along the lines K₂K, L₂L, M₂M, N₂N, P₂P, 3M₄M, 5M₆M, and Q₂Q. Cheap paper board is favoured for this model, the inner surface being cream-coloured and the outer greyish or pale buff.

Regarding dimensional data, the length of this model is 5 inches, its width is $3\frac{1}{2}$ inches, and its depth is 2 inches only. The total weight uncharged, including the paper end sealing flaps, is just under $\frac{1}{2}$ of an ounce.

INTERESTING SEVEN-PIECE EXAMPLES

A pair of exceptionally interesting seven-piece models are next taken up for discussion, in each case partitions being provided.

Taking the trough portion of Fig. 177 first, the trough base is made up of A, plus 2A, 2A being the area of one of the compartments. The back of the box is shown at D, the front at E, one side at B, and the other at C. The two sides, however, are compound, *i.e.*, F and H are wire-stitched on to the inner surface of B, and slightly overlap, while G and J are similarly wire-stitched on to the inner surface of C, and also slightly overlap. Right-angled bends must be arranged for along the lines K₂K, L₂L, M₂M, and N₂N, while knife cuts or slits are required along the lines OM, 2MP, QN, and 2NR. The trough is not attached to the lid or cover by any other means except its own grip.

Taking the lid or cover next, A is the lid top, B and C are the sides, D is the back, and E, 2E forms the front, E being the small special printing area or label area, carrying wording in the direction of the arrow thereon. D is attached to C and to B by means of wire stitches, as shown by the dots on

both, while similarly 2E is attached to B and to C by other wire stitches. Right-angled bends are arranged for along the lines F2F, 2F2G, 2GG, and GF, the whole of the outer surface of the lid being demanded paper-covered in white or creamy-white material, while in the case of the trough portion the outer surface of B, D, C, and E and narrow margins of A, 2A only are demanded paper-covered in similar material.

Taking the large partition strip next, there are two of

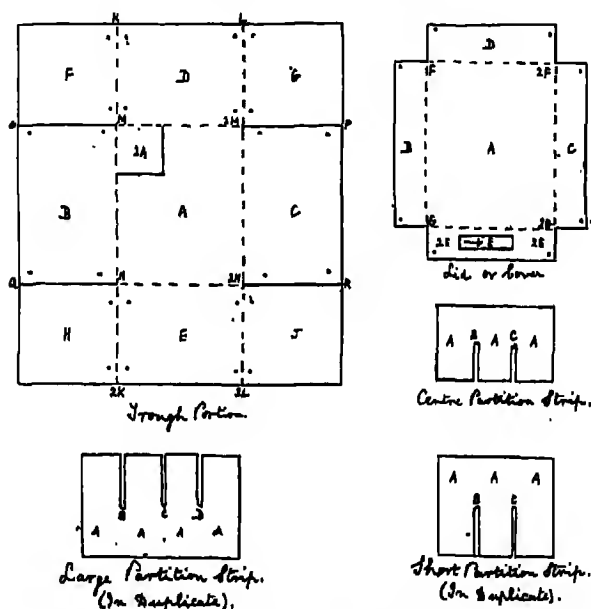


FIG. 177.—SEVEN-PIECE PARTITIONED BOX OF TAPE MEASURE TRADE.

these, each carrying three downward cuts terminating at B, C, D, as shown in the drawing. Both surfaces or neither may be demanded paper-covered.

Regarding the short partition strips, two are required, fitted with upward slits terminating at B and C, as shown in the drawing. These are the full depth of the box.

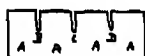
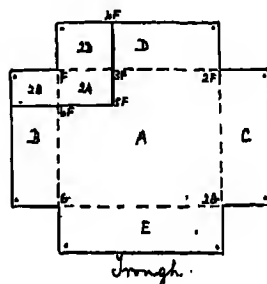
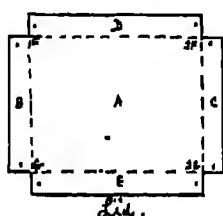
A single centre partition strip is also provided, in which are two upward cuts terminating at B and C, as shown in the drawing. This, though the same length as the short

partition strip, is less in depth, *i.e.*, it does not reach to the full depth of the box itself. Paper covering on both surfaces or neither may be demanded both in the case of the centre and short partition strips.

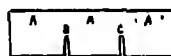
Regarding dimensional data, the length of this box is $6\frac{1}{4}$ inches, its width is 5 inches, its depth is $4\frac{1}{4}$ inches, the total weight uncharged, taking all seven portions together, is nearly $3\frac{1}{2}$ ounces.

Another seven-piece box, which is not as deep as the previous example, is sketched out in Fig. 178.

Taking the lid or cover first, A is its unprinted top, B



Short Partition Strip.
(In Duplicate).



Large Partition Strip.
(In Duplicate).

FIG. 178.—USEFUL UNPRINTED SEVEN-PIECE PACKING OF CLIP TAPE CONCERNS.

and C are the ends, and D and E are the back and front respectively. The corners are attached by single wire stitches, as shown by the dots near the ends of B and C and D and E. Right-angled bends must be arranged for along the lines F2F, 2F2G, 2GG, and GF.

Taking the trough next, its base is made up of A, plus 2A, 2A being the area of one of the compartments. The back is made up of D, 2D, one end is made up of B, 2B, the other of C, and the front of E. While in the previous drawing the compartments are approximately square, in this case F3F5F6FF forms a true rectangle, this being necessary

owing to the particular shape of the clip tapes in question. Here again the corners are attached by single wire stitches, as shown by the dots in 2B, 2D, in D and C, in C and E, and in E and B. Right-angled bends are required, as box-makers will expect, along the lines F2F, 2F2G, 2GG, and GF. No printing or paper covering is demanded on the outer or inner surface of the lid or trough.

Taking the short partition strips first, there are two of these, each being provided with a downward cut, terminating at B in the case of the first cut, C in the case of the second, and D in the case of the third. In other words, each short partition strip carries a trio of these cuts. Paper covering may be demanded on the outer surface or on both surfaces, while some users specify no paper covering.

Turning finally to the large partition strips, of which there are three, each of these is provided with an upward cut terminating at B and C, so that these strips may fit into the three cuts on the pair of short partition strips. Here again paper covering on one surface may or may not be demanded, according to the idiosyncrasy of the particular user. Inexpensive cream-coloured paper or fibre board is usually preferred as the material for all portions of this model.

Regarding dimensional data, the length of this box is $6\frac{1}{2}$ inches, its width is 5 inches, and its depth is $1\frac{3}{4}$ inches only. The total weight uncharged, taking all seven portions together, is $1\frac{3}{4}$ ounces approximately, hence it will be rightly assumed that light material only is employed.

THREE-PIECE AND SIX-PIECE BOXES

Fig. 179 shows an interesting partitioned box of the tie trade. Taking the lid or cover first, A is the top, B and C are its ends, D is its back, and E is its front. Right-angled bends must be arranged for, as the trade will expect, along the lines F2F, 2F2G, 2GG, and GF. The corners are joined by rather long but rather narrow heavily-gummed paper slips not shown in the drawing, and the whole of the outer surface of the lid is demanded paper-covered, coloured

margins usually being preferred along the outer surface of the bends.

Turning next to the main trough, to which the lid or cover is not as a rule attached by any other means except its own grip, the trough base is made up of A, 2A, 3A, the back of D, 2D, the front of E, 2E, the unprinted end of B, 2B, and the printed end, carrying print on its outer surface in the direction of the arrows, of C, 2C. Paper frills, chamfered at two corners, are provided in the case of the front and back, these being lettered in one instance 2D, F, and in the other 2E, G, the narrow strips 2D and 2E being, therefore, the overlapping margins of the actual board of the front and

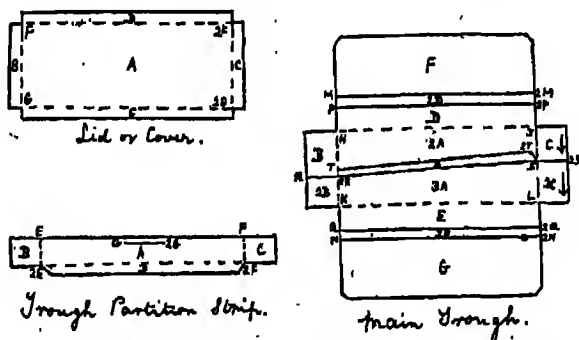


FIG. 179.—THREE-PIECE PARTITIONED BOX OF THE TIE TRADE.

back. Right-angled bends are arranged for, as box-makers will rightly anticipate, along the lines HJ, JL, LK, and KH, the corners being joined by the usual stout, heavily-gummed paper slips, none of which are shown in the drawing for the sake of clearness. The bends of the ends, viz., HK and JL, are frequently fortified on the outer surface by similar paper strips, and in some instances separate ends are made; these forming individual rectangles of strawboard.

In regard to finishing the main trough, the whole of its outer surface is usually demanded paper-covered, but that on the front, back and ends is of good quality creamy-white material, while that of the base itself is of cheaper greyish-white material. The internal margins of paper covering on the ends usually attain a depth of half-an-inch on C, 2C,

and B, 2B, and are concealed by the frill overlaps 2D and 2E in the case of the other portions.

Turning finally to the trough partition strip, the main division is formed of A, and this is fitted with a slit G2G, to take an advertising paper oval describing the contents, or describing some other line. A long narrow adhesive strip is provided at D, and short, almost square, adhesive strips are also provided at B and C. When in position D of the trough partition strip adheres to and completely conceals A of the main trough, B of the trough partition strip adheres to and completely conceals 2B of the main trough, while C of the trough partition strip adheres to and completely conceals C of the main trough. From this it will be assumed that a full right-angled bend is made along the line 2E2F, and that the bends E2E and F2F of the trough partition strip are not strictly ninety degrees.

Regarding dimensional data, the length of this box is $13\frac{1}{2}$ inches, its width is $5\frac{1}{2}$ inches, and its depth is 2 inches only. The total weight uncharged, taking all portions together, *i.e.*, including partition strip, is $6\frac{1}{4}$ ounces exactly.

Fig. 180 shows an interesting six-piece partitioned box emanating from the hair-net industry. Taking the main box first, its top is made up of A, plus 2A, A being the inner surface printing area, carrying wording and illustration in the direction of the arrow. The base of the box is made up of B, 2B, the rectangle MO2PP being the area of a single compartment. The lid sides are made up of F, 2F and G, 2G, the strips 2F and 2G being the tape attachment strips by means of which a tape is made to adhere to the lid; the other ends of the tape are concealed by the paper covering of H and J, which last form the two sides of the trough, while E forms its front and C forms its back, D forming the outer box front or lid front. The corners K, 2K, M, and 2M are joined by the usual stout, heavily-gummed paper strips, which are concealed under the outer surface paper covering, a similar remark applying to the corners N and 2N, but not to the corners L and 2L. Right-angled bends are arranged for, as box-makers will naturally expect,

along the lines K2K, L2L, M2M, N2N, KL, 2K2L, MN, and 2M2N. The inner surface of the bend L2L is frequently fortified by a rather wide whitish strip of textile fabric, which serves to strengthen this much-used hinge.

Turning now to the long partition strips, of which there are three, each of these is provided with a pair only of

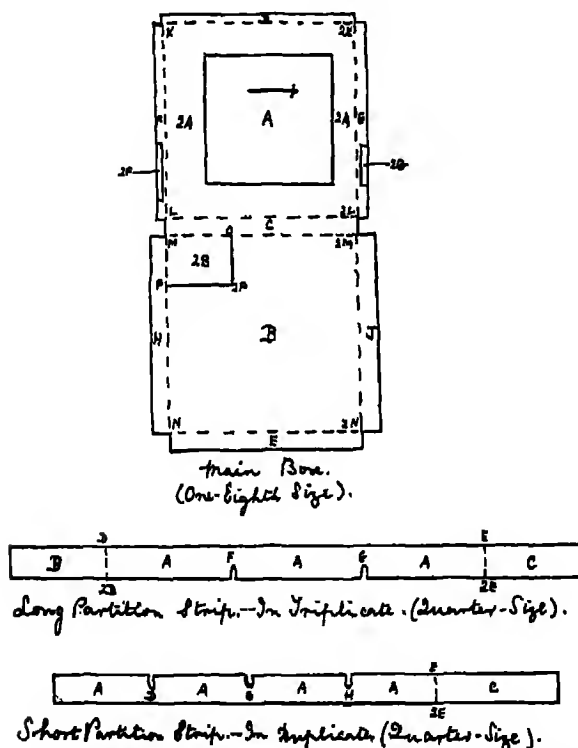


FIG. 180.—SIX-PIECE BOX FOR SALE OF SHINGLED HAIR NETS.

short cuts, terminating at F and G, and also with a pair of right-angled bends lettered D2D and E2E. The extremities of these, lettered B and C, serve to fortify the sides H and J of the base B of the main box, i.e., they bend over and adhere to the inner surfaces of these portions, this being an unusual feature. They are further attached to H and J by means of an overlapping inner margin of outer surface

paper covering. Along both sides of the top edge of all partition strips, both short and long, is a paper covering of white material, which makes them additionally attractive.

The short partition strips are two in number, and these are provided with a trio of downward cuts terminating at D, G, and H, and with one bend only lettered E2E, this being a full right-angle. By this means C of the two short partition strips serves to fortify the trough front E of the main box, adhering to its inner surface, and being attached thereto by an extension of the outer surface paper covering.

Regarding dimensional data, the length and width are 12 inches each, *i.e.*, the base forms a perfect square; the depth is 1 inch only, and the total weight uncharged, taking all six portions together, is just under 8½ ounces.

CHAPTER XXXII

AGAIN, in this chapter, as will be noticed, several boxes are depicted fitted with partition strips or with actual inner boxes to form compartments. These types are mostly foreign made, and are widely used abroad for cheap goods of every kind and class. Continental box makers are firmly of the opinion that we in this country do not pay sufficient attention to the partition or compartment question, some of our own examples being very crude compared with the beautifully finished German makes. It will, therefore, be convenient in succeeding chapters, apart from this one and the preceding one, to devote some attention to the inner divisions of the trough portion of boxes, since there is no doubt that the provision of partitions or compartments does much to protect the contents from damage, and also enhances the value of the container for display purposes. Any fancy goods trader will tell us if we ask him that goods are more easy to sell in boxes provided with compartments or partitions than in those without them.

TWO-PIECE AND EIGHT-PIECE EXAMPLES

Fig. 181 illustrates an attractive two-piece model emanating from the braces branch of the outfitting industry. Taking the lid first, its top is made up of A, plus 2A, the rectangle 2A being the printing area or label area on the inner surface. The lid sides consist of B and C, and the ends are made up, as will be gathered, of D and E. Right-angled bends are required along the lines F2F, 2F2G, 2GG, and GF, the corners being joined by short heavily-gummed paper slips, stout in character, these being completely concealed by the outer surface paper covering, which in the case of the lid is printed in many directions, as shown by the various arrows thereon. The lid is not

attached to the trough by any other means except its own grip.

Turning now to the trough, A is its base, B and C are its sides, D and E are the ends, while 2D and 2C are the exposed portions of two of the four corner attachment flaps made of extra stout buff-coloured paper, and liberally covered with adhesive on the inner surface. Two others at the opposite

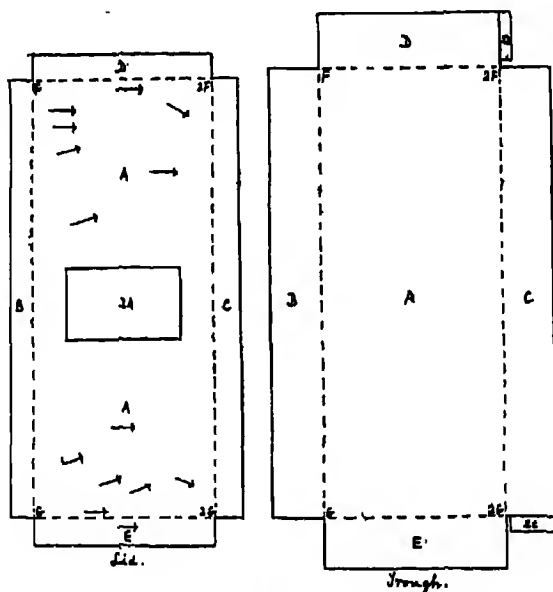


FIG. 181.—TWO-PIECE BOX FOR DOZEN DRAPERS' BRACES.

corners are provided of similar size and shape, but these are not shown in the sketch.

Right-angled bends are required along the lines F_2F , $2F_2G$, G_2G , and GF , also along the lines separating D from 2D and C from 2C. Paper covering is demanded over the entire outer surface of the trough, but the paper of the base is usually cheaper in character and darker in colour than that of the other portions. Inner frills are provided on demand attached to the inner surface of B and C, and a printing area or label area may be specified either on the

outer surface of D or of E, carrying about three lines of print of bright colour. A partition transversely down the centre is sometimes ordered, this resembling that of a preceding model, and also resembling that of a model to be taken up in a succeeding chapter.

Regarding dimensional data, the length of this box is no less than 17 inches, while its width is substantially less, viz., 7 inches. The depth is 2 inches only, and the total

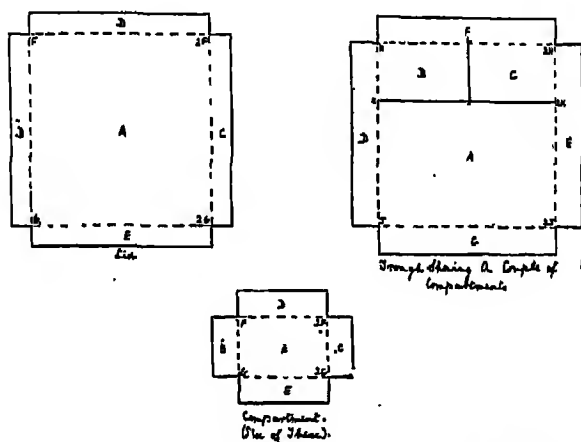


FIG. 182.—EIGHT-PIECE BOX WITH INDIVIDUAL COMPARTMENTS.

weight uncharged, taking lid and trough together, is $9\frac{1}{2}$ ozs. approximately.

Fig. 182 shows a useful compartmented eight-piece example, which should be carefully studied by the trade.

Taking the lid first, A is its top, B and C are its sides, and D and E are its back and front respectively. Right-angled bends are arranged for along the lines F₂F, 2F₂G, 2GG and GF. The corners are joined by the outer surface paper covering, and not by individual corner pieces. This paper covering of white material extends over the entire outer surface of B, C, D, E and A, and to three-quarters, and in some instances half, the depth of B, C, D and E on their inner surface. The lid is not attached to the trough by any other means except its own grip.

Turning now to the trough, this has been drawn with two of its compartments in position on its base. The entire base of the trough is, therefore, made up of A, B and C, four compartments fitting into A, and one each into the rectangles lettered B and C. The trough sides are, as will be expected, made up of D and E, while the back is made up of F, and the front of G. Right-angled bends are arranged for along the lines H_2H , $2H_2J$, $2JJ$ and JH , the corners again being joined by the outer surface paper covering, and not by individual corner slips. Box makers should specially note that, while the entire outer surface of D, F, E and G are paper-covered, only a margin of about half an inch in width on the outer surface of A, B and C, bordering inwards from the folds, is provided, the other surface being exposed strawboard. The inner margins of white paper covering on D, F, E and G are about the same in depth as those on the lid.

Turning finally to the compartments, one only of the half-dozen of which is sketched out in the drawing, these fit pretty tightly into the made-up trough, but are not attached to the base or any other portion of it by any other means except their own grip. The base of the compartment consists of A, the ends of B and C, the back of D, and the front of E. Right-angled bends are arranged for along the lines F_2F , $2F_2G$, $2GG$ and GF , the corners here again being joined by the outer surface paper covering, which in this instance extends nearly to the full depth of B, D, C and E on the outer surface, but not on to the outer surface of the compartment base at all, the paper margin on the inner surface of B, D, C and E being approximately a quarter of an inch in the case of D and E, and rather more in the case of one or both the ends.

Regarding dimensional data, the length of this box is $4\frac{1}{2}$ inches, its width is $4\frac{3}{8}$ inches, *i.e.*, it is very nearly square, the depth being three-quarters of an inch only. The total weight uncharged, taking all eight portions together, *i.e.*, including every compartment, is just under an ounce, and hence box makers will assume that light-weight fibre board only is used in its manufacture.

SINGLE-FRILLED AND DOUBLE-FRILLED COLLAR BOXES

The next two sketches are models from the collar branch of the outfitting industry. Both deserve careful study, and are easily manufactured at a substantial profit in long numbers; manufacture in short numbers frequently proves a costly operation.

Taking the lid of Fig. 183 first, A is its top, B and C are

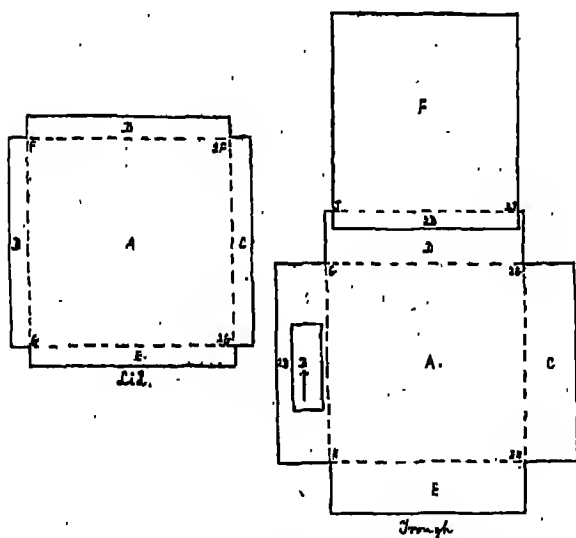


FIG. 183.—USEFUL SINGLE-FRILLED COLLAR BOX OF DRAPERY INDUSTRY.

its ends, D is its back, and E is its front. The corners are joined by one or two thicknesses of textile fabric, instead of by means of the usual stout heavily-gummed paper slips, the length in some instances being nearly 2 inches, and the depth that of the lid ends, front and back. Right-angled bends are arranged for along the lines F2F, 2F2G, 2GG and GF, paper covering being demanded, usually of bright colour, on the entire surface of the lid, and extending to the depth of about $\frac{1}{2}$ inch on the inner surface of B, D, C and E. Bands of white are, however, frequently met with on the

outer surface of the bends, these folds often being fortified by other paper, though such fortification is concealed by the outer surface paper covering. The lid is not attached to the trough portion by any other means except its own grip.

Passing on now to the trough, of which a separate drawing has been carefully made, A is the trough base, E is its front, B, 2B forms one end, C forms the other, and D, 2D forms the back. Only a single frill or paper flap is provided in this instance, but this is unusually large. It is shown, as box makers will expect, by F, 2D, the narrow strip 2D being the marginal overlap on the back of the trough, this overlap being on the inner surface.

Right-angled bends are arranged for along the lines J2J, G2G, H2H, GH and 2G2H. The corners of the trough are joined by the usual stout heavily-gummed paper slips, and not by pieces of textile fabric. These strips do not extend to the full depth of the ends, front and back, and are completely concealed by outer surface paper covering, which last is extended on to the trough base to the depth of about half an inch all round. It is also extended on to the inner surface of 2B, E and C to the depth of about a quarter of an inch, and is concealed on the inner surface of 2D, as will be gathered, by the white paper frill or flap.

Box makers should note that the lid is not printed either on its outer or inner surface, and the trough only carries a printing or label area on the outer surface of one end, viz., B, the direction of the print being that of the arrow thereon.

Regarding dimensional data, the length of this box is 8 inches, and its width is the same, *i.e.*, the trough and lid form perfect squares. The depth is 2 inches only, and the total weight uncharged, taking both portions together, is $5\frac{1}{2}$ ozs. approximately.

Some drapers and outfitters prefer double-frilled collar boxes, and one of these is, therefore, sketched out in Fig. 184.

Taking the lid first, A is its top, B and C are the ends, and D is the back, while E is the front. The corners again are joined by strips of textile fabric, the length of these

being, as a rule, not much more than an inch, and the depth not quite that of the front, back or ends. Paper covering over the entire outer surface of the lid is usually demanded, although the colour of that along the bends is different from that of the rest. The inner margin of the outer surface paper covering is usually about half an inch in depth. The lid, by the way is not attached to the trough by any other means except its own grip.

Turning now to the trough, A is its base, B is one end,

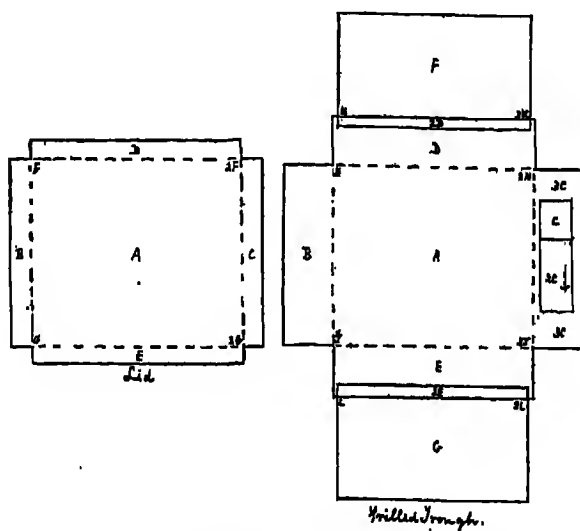


FIG. 184.—TWO-PIECE DOUBLE-FRILLED BOX OF COLLAR COMPANIES.

C, 2C, 3C forms the other end, E, 2E forms the front, D, 2D forms the back, F, 2D forms one paper frill, G, 2E forms the other paper frill, 2C forms the main printing or label area, and C forms the illustration section of the printing area. The overlaps of the paper frills on the front and back are, as will be gathered, depicted by the strips 2D and 2E.

Right-angled bends are arranged for along the lines H2H, 2H2J, 2JJ and JH, as well as along the bends of the frills lettered L2L and K2K. Paper corner pieces have been not

found strong enough for this model, and strips of textile fabric have, therefore, been substituted for them, these being concealed by the outer surface paper covering, although examination proves that they do not quite extend to the full depth of the ends, front or back. In regard to the paper covering, it is demanded over the entire surface, but cheaper and darker material is used for the trough base than for the other portions. The margins on the inner surface of the ends are about a quarter of an inch in depth. The direction of the print is clearly shown by the arrow on 2C.

Regarding dimensional data, the length of this box is 8 inches, and its width is $7\frac{1}{4}$ inches only. It, therefore, does not form a perfect square. The depth is 2 inches, and the total weight uncharged comes to $3\frac{3}{4}$ ozs. exactly.

SIX-PIECE AND SEVEN-PIECE PARTITIONED BOXES

Fig. 185 illustrates an exceedingly attractive six-piece example emanating from the toilet outfit industry.

Taking the trough and lid first, these are sometimes made in two pieces, and fortified by a hinge along the line M2M. Taking them as a single piece, however, in this instance, in which the model before me is, A is the illustration area of the lid on the inner surface, the entire lid being made up of A, 2A which forms the top, F and G which form the ends, and C which forms the front. A tape K is attached to the inner surface of one lid end F, and the other extremity of this is attached to the inner surface of H of the trough as shown by the strip lettered 2H.

The trough itself is made up of B, plus 2B, which together form the base, 2B being the area of one compartment. The back is similarly made up of D, 2D, the front of E, 2E, one end of H, 2H, and the other end of J only. The corners L, 2L, N, 2N, P and 2P, respectively, are joined by the usual stout heavily-gummed paper slips. The other two corners, viz., M and 2M respectively, are left loose. Right-angled bends are arranged for, as box-makers will expect, along the lines L2L, M2M, N2N, P2P, LM, NP, 2L2M and 2N2P. Omitting the base B, 2B, the whole of the outer

surface is demanded paper covered, and is usually ordered printed in several colours. Only narrow margins of the outer surface of the base B, 2B are similarly paper covered, the major portion being bare strawboard. The margin is widest in the downward direction along the line N₂N. The inner margins of the paper covering are about half the

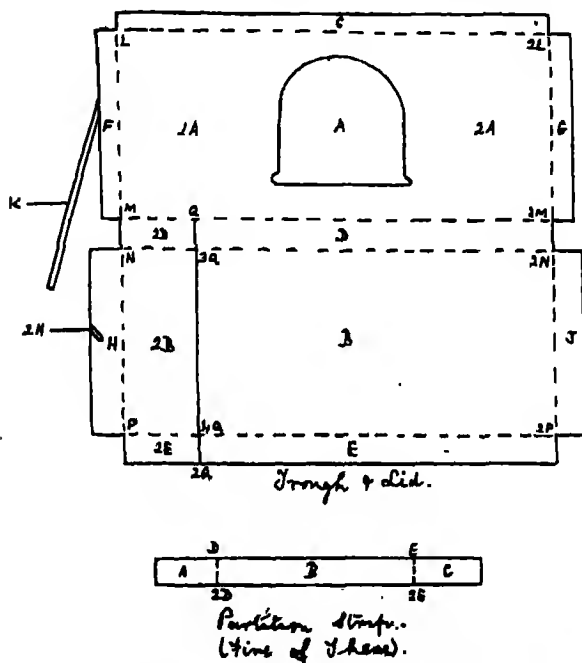


FIG. 185.—SIX-PIECE PARTITIONED EXAMPLE FOR POCKET TOILET OUTFITS.

depth of the respective portions, although in some cases they are wider. A long narrow strip is also provided in an upward direction along the line M₂M.

Turning now to the partition strips, of which there are five, B is the front, and A and C are the two ends respectively. Right-angled bends are arranged for along the lines D₂D and E₂E. One end fits on edge along the line N₃Q, and the other along P₄Q, while B fits on edge along the line 3Q₄Q. All five of these partition strips are held in place by

inner surface paper covering, extending to about half their own depth, and a very secure and attractive box results.

Regarding dimensional data, the length of this model is $11\frac{3}{4}$ inches, its width is 5 inches, and its depth is $\frac{7}{8}$ inch only. The total weight uncharged, taking all six pieces together, is $3\frac{1}{4}$ ozs. approximately.

Fig. 186 shows a seven-piece partitioned box of the toy trade. Taking the lid first, A is its top, B and C are the ends, D is the back, and E is the front. The corners are joined by wire stitches as shown by the dots, and right-angled bends are arranged for along the lines F2F, 2F2G,

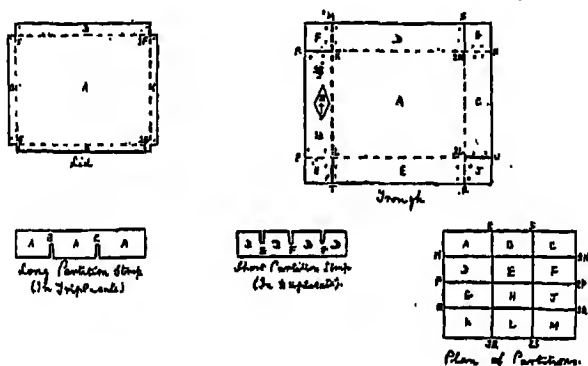


FIG. 186.—SEVEN-PIECE BOX OF CELLULOID TOY DUCK AND SWAN TRADE.

2GG and GF. The lid is not attached to the trough by any other means except its own grip.

Taking the trough next, A is its base, C is one end, B, 2B form the other end, B being the four-sided printing area carrying a few lines in the direction of the arrow. As readers will expect, D is the back, and E is the front, while various subsidiary flaps are provided as shown at F, G, J and H. To free these from the rest, cuts are made along the lines RK, S2K, 2LU and LT. These flaps are joined to the ends, front or back as the case may be, by two wire stitches, as shown by the two dots on each, right-angled bends being made along the lines MK; KN, 2KQ, 2LP and LK.

A trio of long partition strips is provided, each strip being provided with an upward cut terminating at B and C, as shown. A couple of short partition strips must also be provided, and each of these should contain cuts in a downward direction terminating at E, F and G as shown. The method of putting these strips together is clearly shown by the plan of partitions, R2R and S2S being the short ones, and N2N, P2P and Q2Q the long ones. By this means the trough base is neatly divided up into twelve compartments.

Paper covering is not, as a rule, demanded either on the outer surface or inner surface of the lid, trough, or any of the partitions. The printing area of the trough already referred to may, however, consist of a printed label of paper, but in some instances direct printing on to the paper board is insisted upon. No fortifying of the bends alike of the lid or trough is usually called for.

Regarding dimensional data, the length of this box is $12\frac{3}{4}$ inches, and its width is $10\frac{1}{2}$ inches. The depth is 3 inches only, and the total weight uncharged, taking all seven portions together, is $6\frac{1}{2}$ ozs. exactly.

In the next chapter another half-dozen interesting and attractive boxes will be briefly described and illustrated.

CHAPTER XXXIII

IN previous chapters boxes and containers made in many pieces have been briefly described and illustrated. So far as the present chapter is concerned it seems advisable to limit our attention for once to those examples which can conveniently be made in single pieces, which can again easily be made in two pieces, and which lastly require not more than four and not more than five pieces respectively.

Boxes made in more than five pieces are, generally speaking, not very suitable for the smaller firms, although there are, of course, exceptions. Boxes made in one piece are the most suitable for those firms who have not very large factories, as not much machine space is required for these, and the hands very quickly become accustomed to every manipulative operation. Boxes made of one piece are by no means limited in usefulness, as many firms imagine. I could instance at least a dozen trades which use them, and which use boxes very similar in type, the variation generally consisting of some particular printing or label area, a sealing device, extra fortification of the folds, or something well within the scope of even the smallest firm, while not too niggling to be attended to by the very largest.

TWO SINGLE-PIECE PACKETS

The first pair of drawings show two very attractive single-piece packets which deserve careful study. In Fig. 187 we have a photographic film pack carton emanating from the Continent, which is a great aid to selling this class of goods.

The front of this example is made up of B, 2B, 3B, 4B, while the back is made up of A, 2A only. The sides consist of C and D, the attachment flap is shown at E, one end is shown at H, 2H, the other at F, 2F, and these ends are extended by end flaps J and G, being supplemented by

a quartette of smaller rounded flaps lettered K, L, M, and N.

Analysing the parts still further, we find that A and B form special printing areas on the main front carrying several lines of lettering in the direction of the arrows, the colour of this being generally distinct from that on the rest

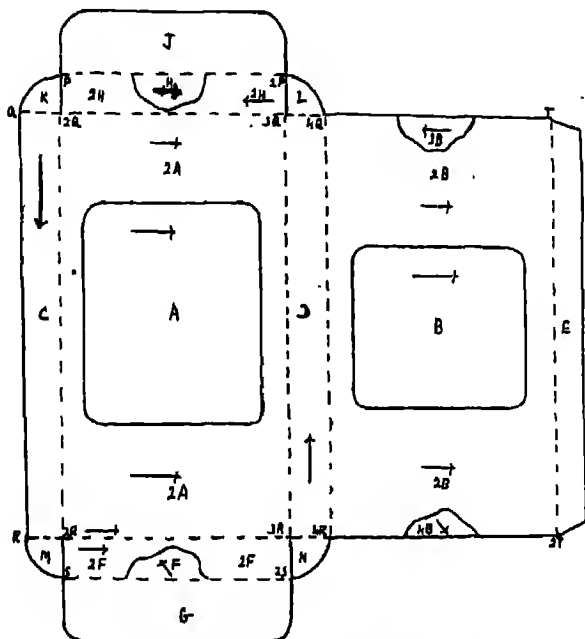


FIG. 187.—SINGLE-PIECE SINGLE DOZEN CARTON FROM PHOTOGRAPHIC FILM PACK INDUSTRY.

of the front and back. We also find that two paper seals are provided, one consisting of H, plus 3B, and the other of F, plus 4B. These carry print in the direction of the arrows, and it should be noted that the direction on one seal differs from that on the other.

To liberate all the various parts, cuts are required, as boxmakers will expect, along the lines P2Q, 2P3Q, 2RS, and 3R2S. Right-angled bends are then made along the lines P2P, Q4Q, R4R, and S2S, taking the horizontal ones

first, and subsequently along the lines 2Q2R, 3Q3R, 4Q4R, and T2T, taking them vertically. Paper covering or a paper finish may be demanded on the entire outer surface, while printing is usually ordered on C and D, 2H, and 2F, in addition to 2A and 2B.

Dimensional data are as follows :—

Total length, $6\frac{1}{2}$ inches ; total width, $3\frac{1}{2}$ inches ; total depth, five-eighths of an inch only ; total weight uncharged, including paper seals, three-quarters of an ounce.

Fig. 188 shows a very useful and attractive toilet trader's samples box. Taking the various portions of this rather elaborate model, C forms the outer top or lid, 2A forms the inner top or lid, A being completely cut out, B forms the main base, 2B, plus 3B, thereon being the special printing area, the lower portion of which is left blank to enable any special number or combination of letters and numbers to be printed on for individual users. Other portions consist of an attachment flap F, which is liberally covered with adhesive, a back E, which is extended to the left and to the right by two flaps L and M, a front D, similarly extended by two flaps lettered J and K, inner top triangles lettered 3A and 4A, main ends lettered G and H, and end flaps lettered 2G and 2H.

Boxmakers and carton concerns should note that cuts are required along the lines XR, 2RY, V2V, and W2W. The bends or folds are of two kinds, *i.e.*, a double right angle must be made along the line N2N, and single right angles are required along the lines R2R, S2S, T2T, U2U, P2P, NS, 2N2S, Q2Q, TU, and 2T2U. Printing is demanded on the outer surface of all those portions carrying arrows except C, upon which the print occurs on its inner surface.

Dimensional data are as follows :—

Total length, $4\frac{3}{4}$ inches ; total width, $3\frac{1}{2}$ inches ; total depth, 1 inch ; total weight uncharged, three-quarters of an ounce approximately.

A PAIR OF TWO-PIECE TYPES

Many thousands of boxes are required each year by the steel pen industry, in spite of the ever-increasing popularity

of the fountain pen. One of these, constructed in two pieces, is sketched out in Fig. 189.

Taking the cover first, B is its base, D is one side, A, 2A

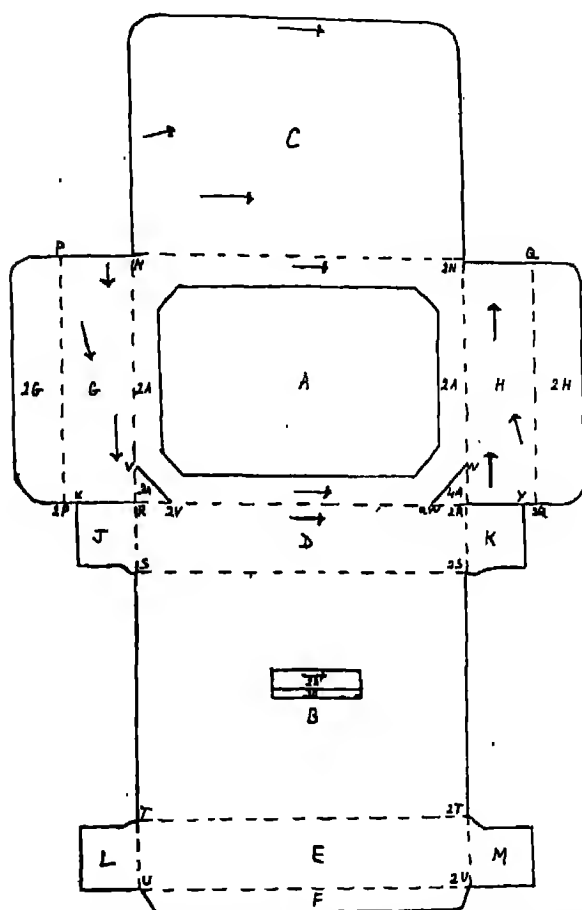


FIG. 188.—SINGLE-PIECE SAMPLES BOX OF TOILET TRADERS.

forms the top, A being a special printing area of distinct type and colour, C is the other side, and E is the attachment flap, which is generously covered with adhesive and then attached to the under side of B. Right-angled bends must be provided along the lines F2F, G2G, H2H, and J2J, while

a printed paper covering is demanded over the entire outer surface of the cover, this being extended on to the trough ends as mentioned below.

Taking the trough next, A is its base, B and C are its sides, F and G are its end flaps, while D, plus 2D, forms one compound end, and E, 2E forms the other compound end. Right-angled bends must be made along the lines H₂H, J₂J, K₂K, and L₂L, taking the horizontal ones, while another pair of bends must also be provided along the lines JK and

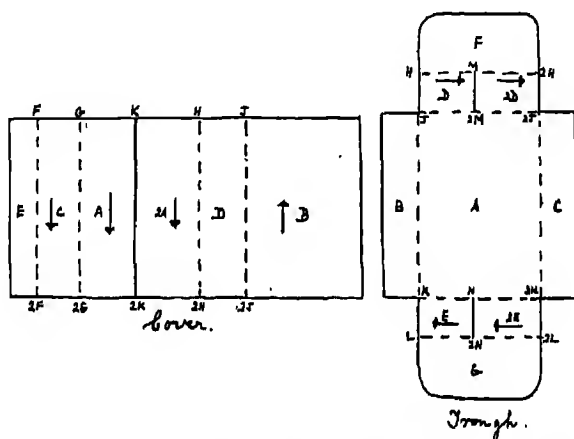


FIG. 189.—SMALL TWO-PIECE BOX OF STEEL PEN PRODUCERS.

2J2K. The corners are not joined by gummed paper or any other means.

After folding the cover and trough the latter is slipped into the cover, and the paper covering from A, 2A of the cover is sealed on to D, 2D, and E, 2E of the trough, although this extension of paper covering is not specially shown in the drawing. The result is that the trough is sealed into the cover and no nibs can be pilfered from the packet without detection. This, by the way, is made unusually difficult owing to the special printing area provided on A, which is similarly extended on to the trough ends.

Dimensional data are as under :—

Total length, $1\frac{1}{8}$ inches ; total width, 1 inch ; total depth,

three-eighths of an inch only; total weight uncharged, taking trough and cover with paper covering together, rather under quarter of an ounce.

Fig. 190 shows a two-piece example from the carbon paper branch of the office requisites industry. Taking the lid first, the top consists of A, plus 2A, and is provided with a hinge at L2L. This hinge, however, is so substantially made that a double right angle is impossible without severe damage. It is fortified on its inner surface by means of a

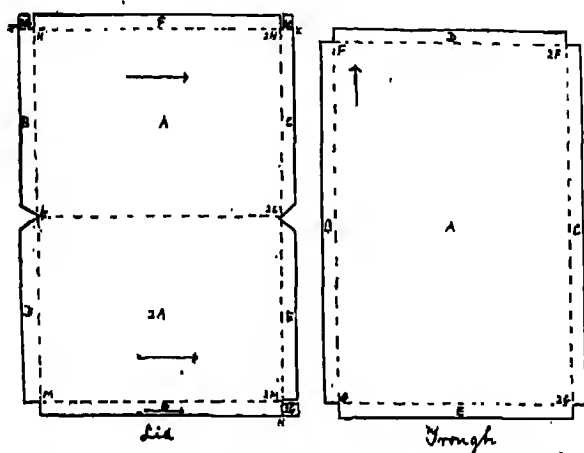


FIG. 190.—LARGE TWO-PIECE BOX OF CARBON PAPER PACKERS.

stout piece of textile fibre or fabric, this not being concealed by a paper covering.

Each of the lid sides is made up of two portions, *i.e.*, one side consists of B, plus D, and the other of C, plus E. The corners H and 2H are joined by heavily gummed paper flaps extended from B and C as shown by 2B and 2C, the corners M and 2M being joined by extensions from G, one of which is shown only at 2G. Right-angled bends must be made along the lines H2H, 2H2M, 2MM, MH, while similar corner bends are made in the case of H, 2H, M, and 2M. The upper or A portion of the lid is attached to the trough by adhesive, by paper covering, or by both, and carries print on its outer surface in the direction of the arrow,

while print is also demanded, as a rule, on the outer surface of 2A and G.

Turning now to the trough, A is its base, and this is not hinged. Two sides are provided at B and C, a back by D, and a front by E. Right-angled bends are arranged for along the lines F2F, 2F2G, 2GG, and GF, the corners being joined by the usual stout heavily gummed paper slips, not shown in the diagram, these, however, being rather longer and rather narrower than those in other models.

Only one type of paper covering is usually demanded on the outer surface of the lid, this being bright in colour. Two kinds are, on the contrary, demanded in the case of the trough, one for the outer surface of the trough base, which is often a pale greyish or drab colour, and the other bright in colour and identical with that of the lid for B, D, C, and E. The trough should always be made to form a very tight fit with the lid, and an extra trough plate similar in size to the trough base should be provided if users are going to send these boxes through the post, this plate being corrugated in character.

Dimensional data are as under :—

Total length, $13\frac{3}{8}$ inches ; total width, $8\frac{1}{4}$ inches ; total depth, half an inch only ; total weight uncharged, taking lid and cover together, 6 ounces or a shade less.

USEFUL FOUR-PIECE AND FIVE-PIECE EXAMPLES

Fig. 191 shows an extremely useful four-piece partitioned box emanating from the fancy garter industry. Taking the trough and lid first, these are sometimes made in two pieces instead of one piece, a junction hinge then being effected along the line R2R. Taking them in one piece, however, in which the model before me actually occurs, A forms the lid top, K the lid front, H and J the lid ends, L the lid back or trough back, B, C, D, E, F, and G the trough base, P the trough front, N one trough end, and M, 2M the other trough end, M being a special printing or label area on the outer surface thereof. The corners Q, 2Q, S, 2S, T, and 2T are joined by heavily gummed paper slips, none of which are shown in the drawing.

Analysing the parts still further, we find that the base is divided up into no less than six compartments, and instead of giving a separate plan of the partitions these are shown *in situ*, and lettered B, C, D, E, F, and G respectively. Another special point which boxmakers should note is that the printing on the lid top A is on its inner surface, whereas

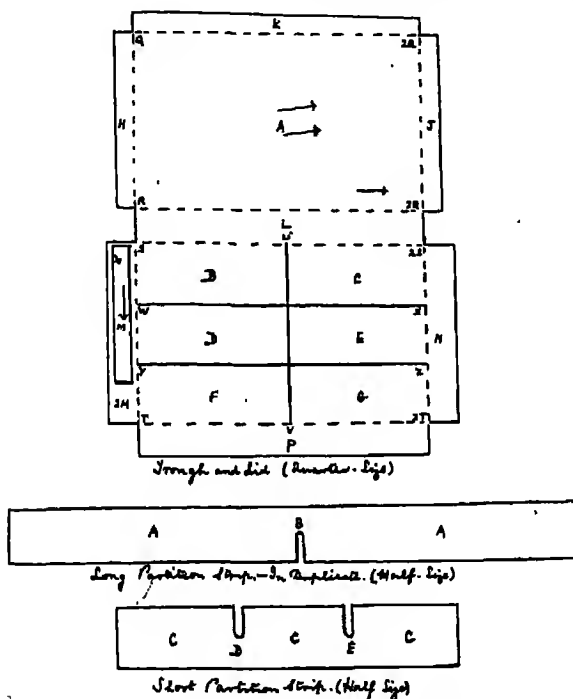


FIG. 191.—FOUR-PIECE PARTITIONED BOX OF FANCY GARTER FORM.

the printing area M, already mentioned, carries print in two directions on its outer surface. Paper covering is demanded on the entire outer surface except of B, C, D, E, F, and G, there being only narrow margins of paper on this portion of the box, *i.e.*, the major portion of the outer surface of the trough base is bare strawboard.

Right-angled bends should be provided along the lines Q2Q, R2R, S2S, T2T, QR, 2Q2R, ST, and 2S2T. In some

instances tapes may be demanded connecting H with 2M and J with N. In the model before me they are not provided.

Turning now to the long partition strip, one only is shown in the drawing, but two must be provided. Each of these is given an upward cut or nick terminating at B, the position of the long partition strips in the model itself then corresponding with the lines WX and YZ, in the trough base. Only one short partition strip is necessary in this instance, but it must be provided with two cuts or nicks terminating at D and E. Into each of these the two long partition strips fit, the position of the short partition strip in the trough above corresponding with the line UV. These partition strips may or may not be demanded paper covered, but are very rarely ordered in a printed state.

Dimensional data are as under :—

Total length, $11\frac{1}{2}$ inches ; total width, 7 inches ; total depth, $1\frac{1}{4}$ inches ; total weight uncharged, taking all four portions together, $4\frac{1}{2}$ ounces approximately.

Fig. 192 illustrates another type of partitioned box of the outfitting industry.

Taking the lid first, A is its top, B and C are its ends, D and E are its front and back, while right-angled bends must be made along the lines F2F, 2F2G, 2GG, and GF, the corners being joined by stout strips of textile fabric, dark in colour, these being concealed by the outer surface paper covering. The lid is not usually attached to the trough by any other means except its own grip.

Taking the partitioned trough next, its base is made up of A, plus 2A, the position of the partition strip corresponding with the line K2K. The trough sides are shown at B and C, and each of these is extended with a paper frill or flap shown at D and E, two corners of each of which are chamfered. Right-angled bends are arranged for along the lines F2F, and G2G, double right-angled bends not, however, being necessary along the lines H2H and J2J, although the paper falls over into the box to a greater extent than 90 degrees.

Turning now to the partition strip, this resembles one we have had in a previous model. A is the main diagonal, and

B and C are the ends, while D is the attachment flap, which is liberally covered with adhesive, and then applied to the base so that it falls either on to the A side, or on to the 2A side of the line K₂K of the partitioned trough. Obtuse and acute angles must be made along the lines E₂E and F₂F, while a right-angled bend is necessary along the line 2E₂F.

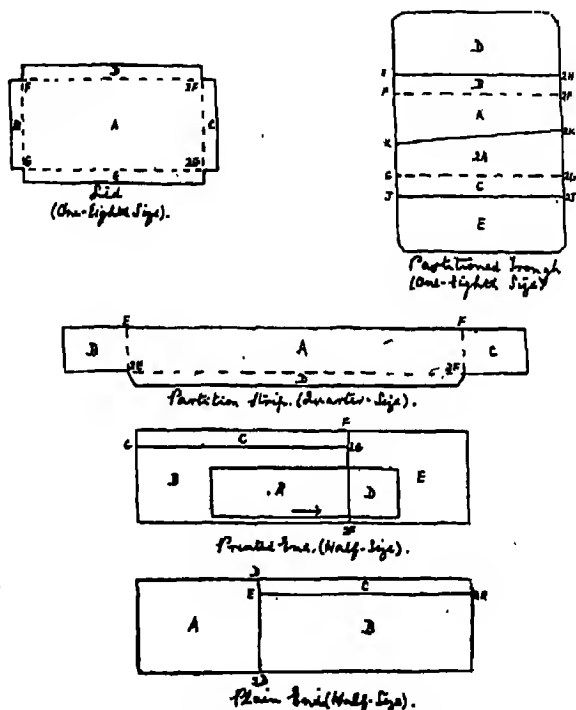


FIG. 192.—FIVE-PIECE PARTITIONED BOX OF OUTFITTING INDUSTRY.

The ends B and C of the partition strip are attached to the trough ends themselves by means of glue.

A pair of end strips must lastly be provided, one of these being printed and the other plain. Taking the printed end first, the printing or label area thereon is made up of A, plus D, and carries print in the direction of the arrow, blank spaces usually being provided to the left and to the

right of the arrow, to allow of individual users' numbers or data being added. On the inner surface of this printed end paper covering is demanded on the narrow strip C, and glue is applied to the two portions lettered D and E. The entire outer surface, *i.e.*, including the special printing area, is paper covered.

Regarding the plain end, its outer surface is entirely paper covered, white material again, like the other end, being favoured, but turning it over we find that only the narrow strip C is paper covered inside, *i.e.*, A plus B, although they may have a papery surface, are not actually paper covered.

These ends are fitted on to the partitioned trough to correspond with the lines FG and 2F2G therein. The corners are then joined by the usual stout heavily gummed paper slips, which are not shown in the drawing, and very frequently the edges FG and 2F2G are fortified by similar gummed paper slips, these being concealed under the greyish outer surface paper covering of the trough base. A very serviceable and, indeed, attractive box results.

Dimensional data are as under :—

Total length, $12\frac{3}{4}$ inches ; total width, $6\frac{1}{2}$ inches ; total depth, $1\frac{3}{4}$ inches only ; total weight uncharged, taking all five pieces together and including paper frills and paper covering, $5\frac{3}{4}$ ounces exactly.

CHAPTER XXXIV

IN the present chapter attention is mainly devoted, as will be seen, to boxes and packets made in one or two pieces. Only a couple of many-piece models are included in this chapter, not because interesting examples are not available, for obviously there are a great many multi-piece boxes which have not yet been discussed, but mainly on account of the fact that for the industries under consideration quite simple boxes and packets will serve. Grocers obviously do not want elaborate six or seven-piece packets for the sale or free distribution of samples, as the moment the sample has been removed therefrom the packet will be thrown into the waste-paper basket and completely forgotten. Much the same thing applies to the business calendar refill trade. To use elaborate boxes made of four or five distinct portions would be waste of time and money, as once the refills have been taken from the carton and put into the metal calendar holder itself the other is thrown away.

Boxmakers and carton concerns, therefore, who receive inquiries from industries of this kind for elaborate many-piece models should respectfully suggest to their proposed customers that simple ones will serve, and will be available at a tenth of the price. Customers will appreciate attentions of this kind, and come back, like *Oliver Twist* did, for more, but with a far greater certainty of getting it. If you don't volunteer the information yourself, some other concern is certain to do so, and customers naturally feel aggrieved at having paid ten times the price they need have paid for an elaborate multi-piece example, now that they have found out that a single or two-piece one could have been adapted to have served their purpose equally well.

TWO SINGLE-PIECE PACKETS

Fig. 193 illustrates a useful and attractive samples packet for grocers' prepared cereal foods. Taking the various parts,

the top is made up of A, 2A, 3A, the base is made up of B, the base attachment flap of E, the back of C, and the front of D. One end is made up of H, 2H, K, F, 2F, L, and the other is made up of J, 2J, 2K, G, 2G, 2L.

Analysing the parts still further, we find that A is the illustration area of the top, 3A is the main printing area thereof, although some print is often found in A, and a little on 2A, while adhesive strips are either provided on the outer surface of 2H and 2J, or conversely on inner surface of 2F and 2G. The extreme outer ends are made up of F, 2F,

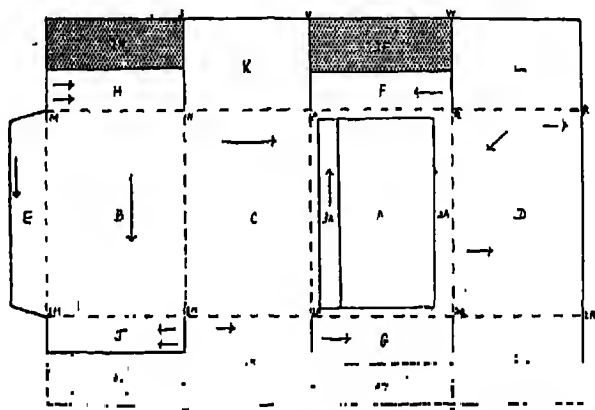


FIG. 193.—SINGLE-PIECE GROCERS' SAMPLES PACKET OF SHREDDED FOOD.

and G, 2G, while 2F overlaps and completely conceals 2H, and 2G similarly overlaps and completely conceals 2J. An adhesive strip is sometimes met with on E instead of covering the whole of its outer surface with glue, and this is then attached to the back of D so that its inner margin M₂M corresponds with the outer margin of D lettered R₂R.

Half a dozen slits or cuts must be made along the lines SN, UP, WQ, 2NT, 2PV, and 2QX. Right-angled bends or folds must be provided along the lines MR, 2M₂R, and also along the much shorter ones, M₂M, N₂N, P₂P, and Q₂Q. Printing in several colours is demanded on the outer surface of those portions bearing arrows, and the wide variation in the direction of the print should be carefully noted. While some portions only

demand a single line, others demand two lines, and on one portion as many as twenty lines of print may sometimes be ordered. Paper covering may or may not be demanded on the outer surface, but in any case a paper finish will be specified.

Dimensional data are as follows :—

Total length, $2\frac{3}{4}$ ins. ; total width, $2\frac{1}{2}$ ins. ; total depth, if considered to be an upright packet, this being measured

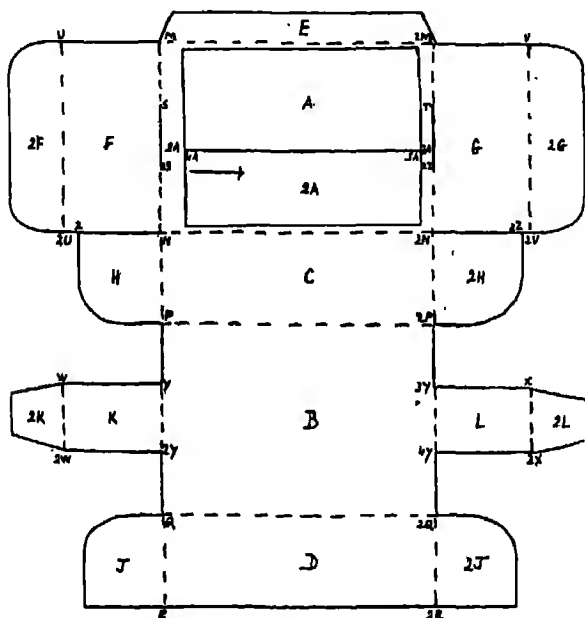


FIG. 194.—SINGLE-PIECE PACKET FOR POSTING BUSINESS CALENDAR REFILLS.

along the line M₂M, 4 ins. ; total weight uncharged, $\frac{3}{4}$ oz. approximately.

Fig. 194 shows a single-piece carton or packet in which refills are posted to firms using business calendars. Taking the various parts, the top is made up of A, 2A, 3A, and of this A and 2A are of the special label area, this being again divided into two parts, *i.e.*, a plain area A, and a printed area 2A, carrying print in the direction of the arrow thereon. The front of this model consists of C, its base of B, and its

back of D, while E is an attachment flap, which, after being covered with adhesive on its outer surface, is attached to the inner surface of D, and is concealed thereby. The left-hand end is shown at F, and this is extended by an end flap, 2F. Similarly, the right-hand end is shown at G, and this again is extended by an end flap 2G. A quartette of smaller subsidiary flaps with one corner of each rounded is provided, these being lettered H, 2H, J, and 2J, while the base is extended to the left and to the right by outer end strips K and L, these in their turn being similarly extended one to the left and the other to the right by outer end flaps lettered 2K and 2L.

To free the various parts, cuts must be made along the lines ZN and 2N2Z, while a pair of further slits must also be made, these being required along the lines S2S and T2T. It is into these after folding that the outer end flaps 2K and 2L fit, holding the ends F and G firmly in place in much the same manner as described in some detail when another example was taken up in an earlier chapter.

Numerous right-angled bends must be made, these varying very much in length. As will be apparent when the sketch is studied and the model is put together, short ones are necessary along the lines MS, 2MT, W2W, Y2Y, 3Y4Y, X2X, QR, and 2Q2R. Further right-angled bends of moderate length must also be made along the lines U2U, V2V, 2SP, 2T2P, while still longer ones are necessary along the lines M2M, N2N, P2P, and Q2Q. Paper covering or a paper finish may be demanded over the entire outer surface of this model, in addition to the label area already referred to, but is rarely specified in the case of the inner surface. Cheap fibre board is preferred to strawboard for this model.

Dimensional data are as follows :—

Total length, $4\frac{1}{2}$ ins. ; total width, $3\frac{1}{4}$ ins. ; total depth, $1\frac{1}{2}$ ins. only ; total weight uncharged, $\frac{3}{4}$ oz. exactly.

A PAIR OF TWO-PIECE EXAMPLES

A huge business is done in cheap mouth-organs by certain foreign firms, and each half-dozen of these musical instruments must be held in a cardboard box.

A widely used box for this purpose, made in two pieces, is sketched out in Fig. 195, and presents few, if any, technical difficulties even to small firms.

Taking the lid or cover first, A is its top, B and C are its thumb-holed sides, while D is one end, and the other end is made up of E, plus 2E, plus 3E, plus 4E. This end is specially interesting on account of the fact that it is supplied with three printing areas or label areas, two small oval ones being found in 3E and 4E, while a larger rectangular one is

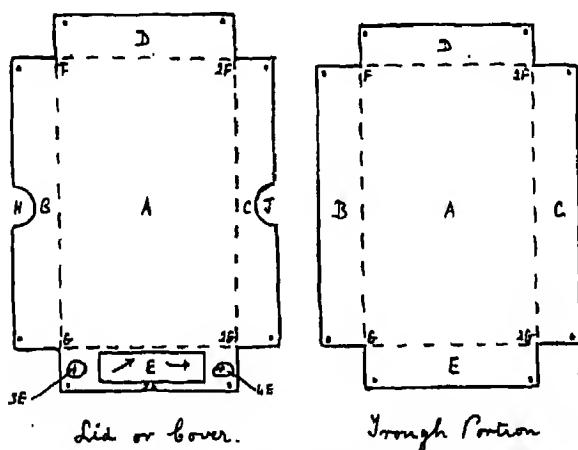


FIG. 195.—TWO-PIECE EXAMPLE FOR SALE OF BRASS MOUTH ORGANS.

provided by E, and this carries print in two directions. Right-angled bends are provided along the lines F2F, 2F2G, 2GG, and GF, the corners being held by single wire stitches, as shown by the black dots in the corners. The entire outer surface of the lid is demanded paper-covered, the fold lines usually being of a different hue to that of the rest, while the inner margins of paper covering on the lid sides and ends usually extend to the depth of about $\frac{1}{2}$ in. The lid, by the way, is not attached to the cover by string, glue, or other means, but merely grips it.

Turning now to the trough portion, A is, as will be anticipated, its base. The two sides again are lettered B and C,

and in this instance the ends are quite simple, and are merely lettered D and E. Here again, right-angled bends must be made along the lines F2F, 2F2G, 2GG, and GF, the corners similarly being joined by the aid of wire stitches, as indicated by the black dots therein. In some instances, however, though not in the particular example before me, the corners of the trough are fortified by concealed heavily gummed paper slips, in addition to being wire-stitched as indicated.

The paper covering is rather different in the case of the trough portion from that described in the case of the lid. The entire outer surface of B, D, C, and E carries paper of a similar hue, but only narrow margins of this extend on to A, *i.e.*, over the lines F2F, 2F2G, 2GG, and GF. No difference of hue is noticeable in this instance in the case of the fold lines. The internal paper margins are slightly less in depth in the case of the trough to those of the lid, and it should be noted also that no print is generally demanded either on the outer or inner surface of the trough portion.

Dimensional data are as follows :—

Total length, $8\frac{1}{4}$ ins. ; total width, 5 ins. ; total depth, $1\frac{1}{4}$ ins. ; total weight uncharged, taking trough and cover together, and including wire stitches, just under 2 ozs.

In addition to there being a big sale for mouth organs, huge numbers of popular-priced cinema sets are manufactured in a certain Northern European country, and here a cardboard box is demanded for each set. One of the most interesting of these types of cardboard boxes for pocket cinema sets is sketched out in Fig. 196, and deserves careful study, as it is a marvel for cheapness.

Taking the trough portion first, this is very simple, and resembles other troughs we have had in previous instalments. The trough base is, as will be gathered, made up of A, the sides of B and C, and the ends of D and E. No corner pieces are demanded, nor is any paper covering specified, but the ends and sides are held together by single-wire stitches as shown by the black dots in each, the approximate positions of these in the actual model being those shown in the sketch. Right-angled bends are necessary, as the trade

will anticipate, along the lines F2F, 2F2G, 2GG, and GF, while it should be noted that the trough is not actually attached to the lid by string, glue, seal, or any other means, but merely grips it.

Turning now to the lid or cover, the top consists of 2A, A, 3A, 4A, and 5A. The lid sides consist in one instance of B, plus 2B, plus 3B, and in the other of C, plus 2C, plus 3C, the ends simply being made up of D and E. The label area is extensive and elaborate, this consisting of A, plus 2B,

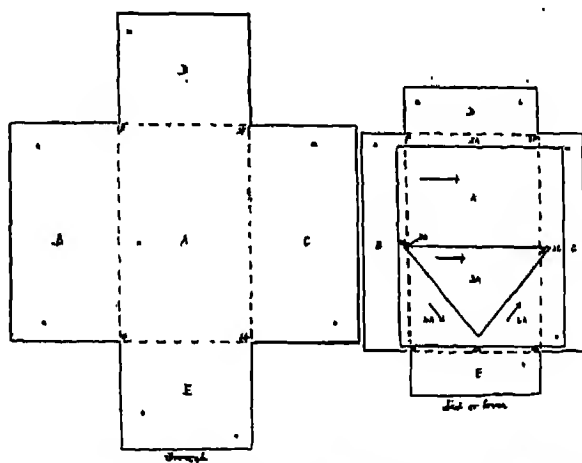


FIG. 196.—TWO-PIECE BOX FOR SMALL POCKET CINEMA SETS.

plus 2C, plus 3B, plus 3C, plus 3A, plus 4A. Print is mainly demanded in a horizontal direction on A and 3A, in a downward direction on the left-hand portion of 4A, and in an upward direction on the right-hand portion thereof.

With regard to folds, right-angled bends are required, as the trade will anticipate, along the lines F2F, 2F2G, 2GG, and GF. The corners are joined by single-wire stitches as shown by the black dots on D, B, C, and E, while no outer or inner paper covering exclusive of the label area is generally demanded. Printing, however, may be ordered in as many as four different languages, a point which British firms should carefully note.

Dimensional data are as follows :—

Total length, 3 ins. ; total width, $1\frac{3}{4}$ ins. ; total depth, $1\frac{1}{2}$ ins., *i.e.*, the end is not a perfect square ; total weight uncharged, taking lid and trough together, slightly under $\frac{1}{2}$ oz.

TWO FIVE-PIECE PACKINGS

Fig. 197 shows an interesting lined model of which long numbers are in use at the present time by manufacturing chemists. Taking the lid first, A is its top, D is its back, E is its front, B and C are the ends, and F, G, J and H are four subsidiary flaps, which turn on to the front and back in the way frequently referred to in previous chapters.

In order to free the various parts, knife cuts must be made along the lines OM, P₂M, NQ, and 2NR, following which right-angled bends must be provided for along the lines K₂K, L₂L, MN, and 2M₂N. G and F are then wire-stitched on to the inner surface of D, and J and H on to the inner surface of E, as shown by the pairs of dots on each. As supplied, the lid is not attached to the trough by artificial means, but sometimes additional paper sealing devices may be demanded.

Turning now to the trough, a separate detailed description of this is hardly necessary, as it is an exact counterpart of the lid, except for the fact that it is a shade smaller. All slits and bends are identical, and the lettering is, as will be seen in the drawing, the same. A paper finish is, as a rule, demanded alike on the outer and inner surface both of the trough and the lid, but this model is mostly ordered in an entirely unprinted state, firms attaching thereto their own labels.

Now with regard to the lining of this interesting example, a separate sketch is given of the main lining strip, and of this A is its top, C is its back, B is its base, and D is its front. Right-angled bends are demanded along the lines E₂E, F₂F, and G₂G, but A is not attached to D by paper or other means, nor is it definitely attached to the trough portion, except by its own grip.

Two end lining strips are also provided, but a sketch of

only one of these is given, as they are identical in character. These fit loosely into the ends of the main lining, strengthening the ends B and C of the trough, but not being attached either to the main lining or to these portions by any other means than the combined grip of themselves and the main lining strip. Good class corrugated strawboard is preferred for the main lining and end lining portions, but no paper

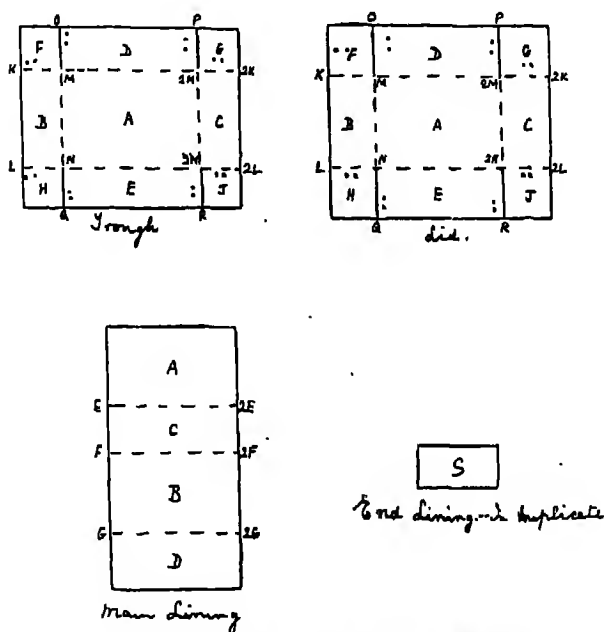


FIG. 197.—FIVE-PIECE LINED MODEL USED BY MANUFACTURING CHEMISTS.

covering or printing is generally specified on any surface thereof.

Dimensional data are as follows :—

Total length, $4\frac{1}{4}$ ins. ; total width, 3 ins. ; total depth, $1\frac{1}{2}$ ins. ; total weight uncharged, taking all five portions together, $1\frac{3}{4}$ ozs. exactly.

A rather elaborate portable sewing box from the fancy goods industry is selected for the final model in this chapter, and sketches of its various parts will be found in Fig. 198.

Taking the trough and inner lid first, the trough base is made up of four triangles, C, B, D, E; C, and D being of the same size, and B and E being of equal area. The trough ends consist of F and G, the front of J, the back of H, the main inner lid of A, 2A, 3A, and the inner lid textile band for holding pins, needles, bodkin, etc., of 2A. Right-angled

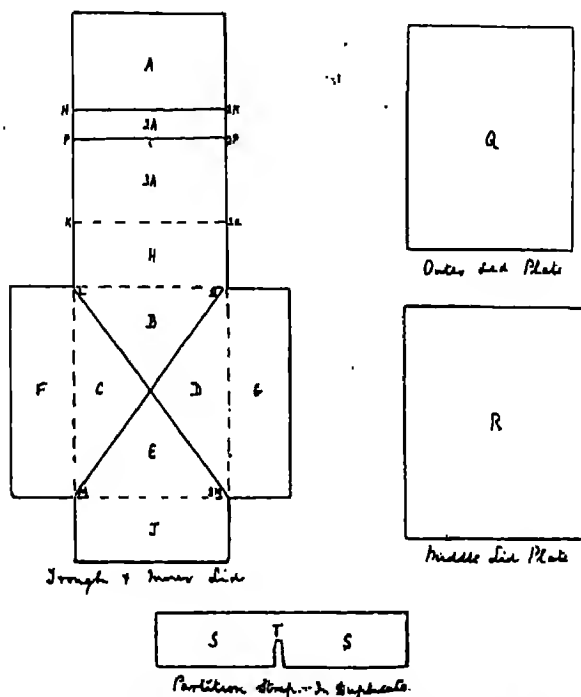


FIG. 198.—FIVE-PIECE PORTABLE SEWING BOX OF FANCY GOODS STORES.

bends are required, as boxmakers will expect, along the lines K2K, L2L, M2M, LM, and 2L2M, the corners L, 2L, M, and 2M being joined by the usual stout heavily gummed paper slips, these being completely concealed, however, under the outer surface paper covering. A strong inner surface covering of textile fabric will be found on both sides of the line K2K, in order to strengthen this very important hinge.

Paper covering is demanded over the entire outer surface

of F, G, H, and J, and on the outer surface of the trough base, but this is of a different character to that of the trough sides, etc. Narrow margins of paper extend on to the inner surfaces of F, G, and J, but an imitation or actual paper surface is preferred on the inner portions. With regard, however, to the inner lid, actual paper covering is always demanded on its inner surface, and this is crossed by the textile band 2A.

On to the outer surface of the inner lid A, 2A, 3A, the middle lid plate R, of which a separate drawing is given, is attached by means of glue or other adhesive. Then on to the outer surface of the two, an outer lid plate, Q, of which again a distinct drawing is given, is attached, this being slightly smaller than the middle lid plate, as will be noticed, and containing, as a rule, a stamped design on its outer surface. Paper covering of the outer lid plate is nearly always ordered, this being of similar character to that of F, G, H, and J. No clip or other device is found in this model to hold the lid securely on the trough, but experience has shown that the weight is sufficiently heavy, as a rule, to do so.

Two partition strips must also be provided to complete this model, but only one is shown in the sketch, as their size and character do not vary. As will be noticed in the drawing of the partition strip, an upward cut terminating at T is made, but obviously in the case of the second strip a downward cut will be substituted for the upward one. Each of these partition strips is wholly paper-covered on one surface only, the paper covering being similar in character to that of the inner surface of A or 3A. On the other surface, however, a narrow margin of paper covering only is provided, the depth of this being about $\frac{1}{4}$ in., or sometimes slightly more. One of these partition strips is then inserted into the made-up trough along the line L₂M, and the other along the line M₂L, the slits enabling them to intersect, and thus dividing the trough into four triangular compartments.

Dimensional data are as follows :—

Total length, 4 ins. ; total width, $3\frac{1}{4}$ ins. ; total depth, $1\frac{1}{4}$ ins. ; total weight unchanged, taking all five portions together, $1\frac{1}{4}$ ozs. approximately. *

CHAPTER XXXV

I SHALL take up for discussion and illustration in the present chapter an American book box. This is, as will be seen, sketched out in Fig. 199 herewith, but before giving details concerning it there is a small point that I would like to drive home.

In the United States considerable use is made of boxes for the packing of books, even if these are by no means costly in character. In England, however, up to now it has only been considered worth while to use cardboard or paper-board boxes for the sale of very expensive bound volumes, except, of course, the small stuff in fancy bindings which is sold round about Christmas and the New Year. Whereas the book box sketched out was used to take a book in America which retailed at the low price of under three dollars a copy, in England, as boxmakers will probably know, it is rare to find a box used for a book sold at under three guineas, with the above-mentioned exception. Boxmakers should, however, encourage publishers to make use of cardboard boxes for cheap books, say, down to five shillings a copy; these boxes can be manufactured cheaply in long numbers, and enable books to be sent by post or rail with much less risk of damage than if they are wrapped in the ordinary way in paper. One sheet of paper is all that is required to cover the box containing the book, and if boxes are used parcels of books can, therefore, be dispatched very much more rapidly than if the ordinary paper wrapping system is adopted.

TWO-PIECE BOXES FOR BOOKS AND TOYS

Turning now to the sketches, Fig. 199 illustrates a very popular type of American book box, which is about as cheap to manufacture as any we have had for the packing of other

merchandise. Taking the lid or cover first, the top consists of A, 2A, and of these A is the special printing area, containing often as many as nine lines of print as shown by the arrows thereon. The lid slides are made up of B and C, and thumb-holes lettered F and G are cut out of these. Correspondingly the lid ends consist of D and E, and right-angled folds must be made along the lines H2H, 2H2J, 2JJ and JH. The corners are joined by extra stout paper slips, the exposed portion of one of which is shown at 2C. This is separated from E by the line 2JL, but adheres to E after

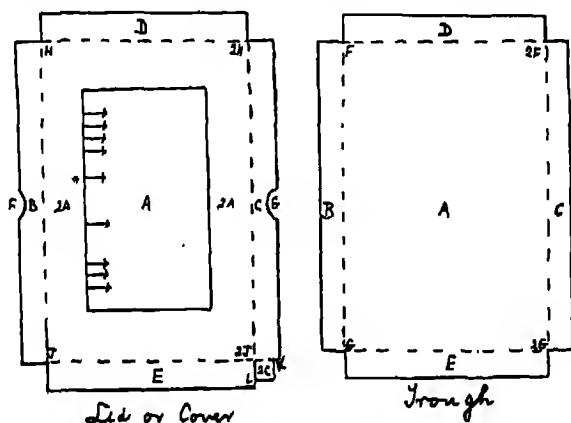


FIG. 199.—USEFUL TWO-PIECE TYPE OF AMERICAN BOOK BOX.

folding along the line 2JK. A concealed portion of similar size to 2C is found on C, under the outer surface paper covering.

Rather wide margins of inner surface covering extend on to D, C, E and B, in some cases the paper extending almost to the full depth of the sides, and about to half the depth of the ends. The inner surface of the lid carries no print, and the lid or cover is not attached to the trough by any other means except its own grip.

Turning now to the trough, this resembles the lid or cover in many respects, as will be seen from the sketch. The trough base is made up of A, the trough sides of B and C, and the ends of D and E, the corners being joined by slips

of a similar character to those of the lid or cover, and an outer surface paper covering extending over the whole of the trough, and on to the inner surfaces of B, D, C, and E, though the margins are not, as a rule, as wide as those of the lid or cover. Right-angled bends must be arranged for along the lines F_2F , $2F_2G$, $2GG$ and GF , while it should be noted that the trough itself is not demanded printed either on its outer or inner surface.

Dimensional data are as follows: Total length, $9\frac{1}{2}$ ins.; total width, $6\frac{1}{4}$ ins.; total depth, $\frac{5}{8}$ in. only; total weight uncharged, taking trough and cover together, $3\frac{1}{4}$ ozs.

Turning now to an extremely different trade, I strongly

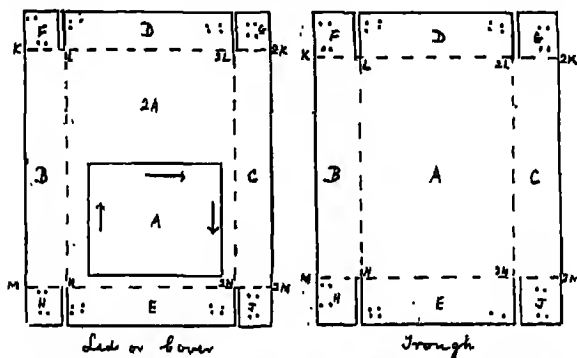


FIG. 200.—TWO-PIECE BOX FROM TIN TOY TRADE.

recommend boxmakers who are not already doing business in this direction to get in with the tin toy manufacturer, as very long numbers of boxes which are easily and cheaply manufactured are required for this market. One of the most interesting of these is sketched out in Fig. 200.

If we take the lid or cover first, its top is made up of A, plus 2A, and of these A is the special printing area or label area, carrying lettering in several directions as shown by the arrows thereon. The lid sides consist of B and C, the ends of D and E, and each side is extended by end flaps F and H and G and J, these being separated from the ends themselves by cuts terminating at L, 2L, N and 2N respectively.

Right-angled folds must be arranged for along the lines,

K₂K, M₂M, LN and 2L₂N, after which F is twice wire-stitched on to D, and G twice wire-stitched on to D, as shown by the two pairs of dots on each, H similarly being twice wire-stitched on to E, and J twice wire-stitched on to E, in accordance again with the two pairs of dots on each. The lid or cover, by the way, is not attached to the trough portion by any other means except its own grip.

Passing on now to the trough, this resembles the lid or cover in many respects, as a glance at the sketch will show. A is the trough base instead of the lid label area, however, and B and C are again the sides, D and E being the ends. Here also four end flaps are provided extending the sides, these being lettered F, G, J and H. They are twice wire-stitched on to D and E in exactly the same manner as specified for the lid or cover, and are separated by similar slits from the ends D and E, *i.e.*, these slits terminate at L, 2L, 2N and N as before.

Right-angled folds must be arranged for along the lines K₂K, M₂M, LN and 2L₂N, but owing to the thickness of the board used alike for the lid and trough in many instances it is found best to make these bends in two portions, *i.e.*, two parallel fold lines instead of one, each amounting to forty-five degrees. These lines are separated by a narrow strip, which it is difficult to show satisfactorily unless a much enlarged drawing is given.

A paper covering or a paper finish is usually demanded on the entire outer surface alike of the lid and trough, this being in addition to the special printing area or label area already described in connection with the lid. No inner margins of paper covering, however, occur on the other surfaces.

Dimensional data are as follows: Total length, 8 ins.; total width, 5½ ins.; total depth, 1¾ ins. only; total weight uncharged, taking lid and cover together and including wire stitches, 3½ ozs. approximately.

TWO-PIECE EXAMPLES FROM DIARY AND CHRISTMAS CARD INDUSTRIES

Fig. 201 illustrates an interesting two-piece example used by five-year diary packers. Taking the lid or cover first,

A is its top, B and C are the sides, two thumb-holes H and J being provided as shown, while one end is made up of D and the other is almost completely covered by the three-piece printing area lettered E, 2E, 3E, carrying wording in the direction of the three arrows thereon. Corner pieces of thin paper are provided under 2E and 3E, to join these portions to B and C, while similar strips of heavily gummed paper are used for the corners F and 2F. Right-angled folds are arranged for along the lines F2F, 2F2G, 2GG and GF, the whole of the outer lid surface being paper covered in addition to the special printing or label area already referred

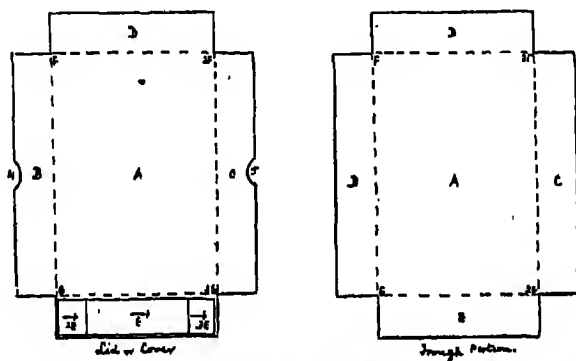


FIG. 201.—TWO-PIECE BOX FOR FIVE-YEAR DIARY PACKERS.

to, narrow margins of this paper covering being continued on to the inner surfaces of the lid sides and ends, the depth of these being rarely more than about $\frac{1}{4}$ in. The lid, as a rule, is not attached to the trough by any other means except its own grip, but occasionally boxmakers may be required to supply a thin indiarubber band for holding it on.

Regarding the trough portion, a detailed description of this is not necessary, as it resembles the other troughs we have had. It is, therefore, enough to say that the trough base is made up of A, the sides of B and C, the ends of D and E, and that right-angled folds are arranged for along the dotted lines F2F, 2F2G, 2GG and GF, and that paper covering is demanded on the entire outer surface, but that cheaper material is usually employed for the outer surface

of A of the trough than for A of the lid, the paper covering of B, D, C, and E of the trough being identical with that of B, D and C of the lid. Narrow margins, *i.e.*, about $\frac{1}{4}$ in. in depth of paper covering, are extended on to the inner surfaces of the sides and ends of the trough.

Dimensional data are as follows: Length of box, 6 ins.; width of box, 4 ins.; depth thereof, 1 in. only; total weight uncharged, taking lid and trough together, $1\frac{1}{2}$ ozs.

Boxmakers who hope to cater for the Christmas card trade should get busy at once in this direction, as there is no

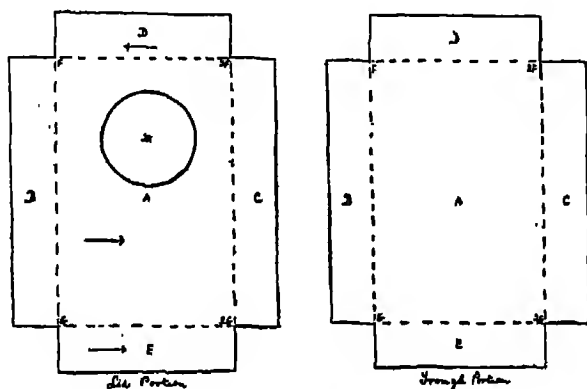


FIG. 202.—TWO-PIECE ILLUSTRATED EXAMPLE FOR SALE OF CHRISTMAS CARDS WITH ENVELOPES.

time like now. One of the most useful types of boxes already employed for the Christmas card industry is sketched out in Fig. 202, and in long numbers this can be produced at a very cheap rate.

Taking the lid first, A is the main lid top, and 2A is the circular illustration area, carrying a design, but no actual wording. The lid top is extended by ends D and E, and by sides B and C, these last not carrying thumb-holes in the present case. The corners F, 2F, 2G and G are joined by paper strips of moderate thickness, these, however, carrying a large amount of adhesive, and adhering very strongly to the sides and ends. Paper covering over the entire outer surface of the lid, including the illustration area, is demanded,

but paper covering is easily removable, and examination of specimens usually elicits the fact that it is only the inner margins of B, D, C and E that carry adhesive, these inner margins being about $\frac{1}{2}$ in. in width. Right-angled folds are arranged for, as boxmakers will expect, along the lines F2F, 2F2G, 2GG and GF, and although in many instances the lid is not attached to the trough by any other means except its own grip, occasionally box firms may be required to supply tape or fancy string to hold the two together.

With regard to the trough portion, this resembles the lid except that it is a shade smaller. The trough base consists of A, the sides of B and C, the ends of D and E, the corners F, 2F, 2G and G being joined as already described, and right-angled folds being required along the lines F2F, 2F2G, 2GG and GF. The whole of the outer surface of the trough portion is again paper-covered, but in this instance the paper adheres strongly to every portion. While the ends D and E of the lid carry print in the direction of the arrows on their outer surface, no portion either of the outer or inner surface of the trough carries any wording whatsoever.

Dimensional data are as follows: Total length of box, $6\frac{1}{2}$ ins.; total width thereof, $4\frac{3}{8}$ ins.; depth, $1\frac{1}{2}$ ins. only; total weight uncharged, taking lid and trough together, 2 ozs. approximately.

TWO-PIECE MODELS FOR MANUFACTURERS OF PHARMACEUTICAL PRODUCTS

Reference has frequently been made to the requirements of the pharmacist as regards boxes and cartons. Two other examples from this trade form the final models selected for discussion and illustration in this chapter.

A small box for indigestion tablets is sketched out in Fig. 203, and taking the cover of this first, its top is made up of A, 2A, A being the oval special printing area carrying quite a considerable amount of wording in addition to the print required on 2A itself. The back of the cover is made up of C, the front of D, and the base of B, these last two portions also carrying print in the direction of the arrows thereon. No attachment flap is provided, as the outer

surface paper covering is sufficient in small examples of this kind to hold B to C. Right-angled bends of a pronounced character must, however, be arranged for along the lines E2E, F2F and G2G, and the outer surface paper covering should be bent over on to the inner surface of C, 2A, D, B to the extent of about $\frac{1}{4}$ in. in the direction of the line 2E2F2G, and the line EFG. This cover is not attached to the trough by other means except its own grip.

Passing on now to the trough itself, for a small example this is quite elaborate. The trough base consists, as will be gathered, of A, the back of D, 2D, the front of E, 2E, and

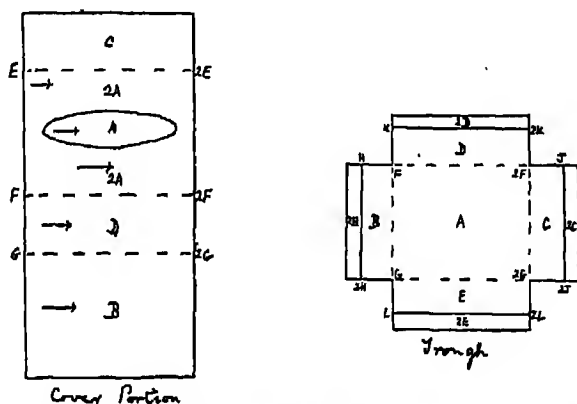


FIG. 203.—SMALL EXAMPLE FOR INDIGESTION TABLETS.

one end of B, 2B, and the other of C, 2C. The strips 2B, 2D, 2C and 2E are the margins of the inner surface paper covering, and boxmakers should note that the entire outer surface of the trough is demanded similarly paper-covered. Special strips for the corners F, 2F, 2G and G are not in this instance provided, as the paper covering proves sufficient to hold the corners together. Right-angled bends are, however, required, as the trade will anticipate, along the lines F2F, 2F2G, 2GG and GF.

Dimensional data are as follows: Total length, $1\frac{3}{4}$ ins.; total width, $1\frac{1}{2}$ ins., *i.e.*, the trough does not form a perfect square; total depth, $\frac{1}{2}$ in. only; total weight uncharged, taking trough and cover together, slightly under $\frac{1}{4}$ oz.

In Fig. 204 we have an entirely different type of two-piece pharmacist's box, which is proving extremely useful for postal work.

Taking the outer strip first, to begin with there are two band-covered portions, these being lettered A and B, and being completely covered with strongly adhering paper strips which are extended over the base in the manner to be described directly.

The whole front of the outer strip is made up of A, 2A, 3A, and the whole back is correspondingly made up of 2B,

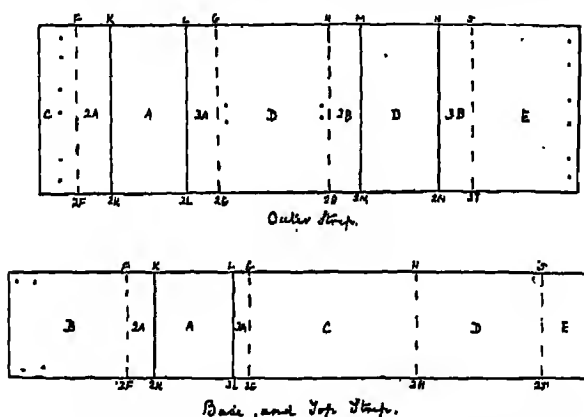


FIG. 204.—BANDED TWO-PIECE POSTAL BOX OF MANUFACTURING PHARMACIST.

B, 3B. From this it follows that one side is made up of D, and the other of E, while the attachment flap consists of C, and this is wire-stitched on to E, as shown by the three pairs of dots in each. Right-angled bends are then arranged for along the lines F2F, G2G, H2H and J2J.

Passing on now to the base and top strip, the top itself consists of D only, and this is extended by a top flap E, which forms a portion of one of the inner sides of this box. The other side or rather inner side consists of C, the complement of the first inner side consists of B, this being wire-stitched on to D of the outer strip as shown by the two pairs of dots in both, while the whole base consists of 2A, A, 3A, A being the paper band strip thereon, corresponding with

A and B of the outer strip. Right-angled bends are arranged for along the lines F₂F, G₂G, H₂H and J₂J, and in some instances transverse bands will be specified over the top D of the base and top strip, and down the side D of the outer strip, as well as down the side E. In some models also special printing areas or label areas are demanded, but these can only satisfactorily be shown in enlarged drawings.

Dimensional data are as follows: Total height of box, $3\frac{1}{4}$ ins.; length of front, $2\frac{3}{4}$ ins.; depth of side, $2\frac{1}{4}$ ins.; total weight uncharged, taking both strips together, and including one paper band, $1\frac{1}{4}$ ozs. approximately.

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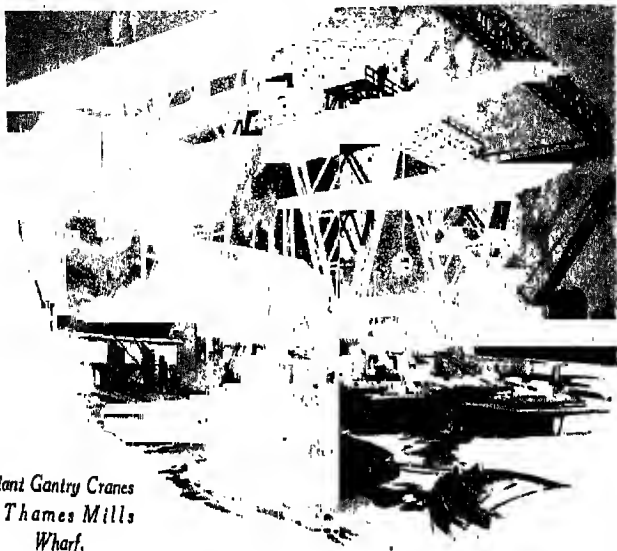
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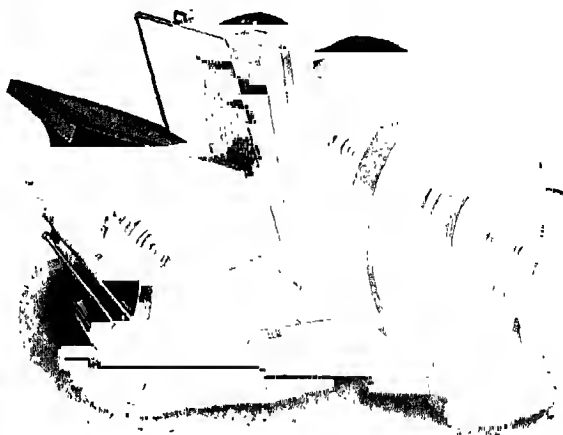
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